This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

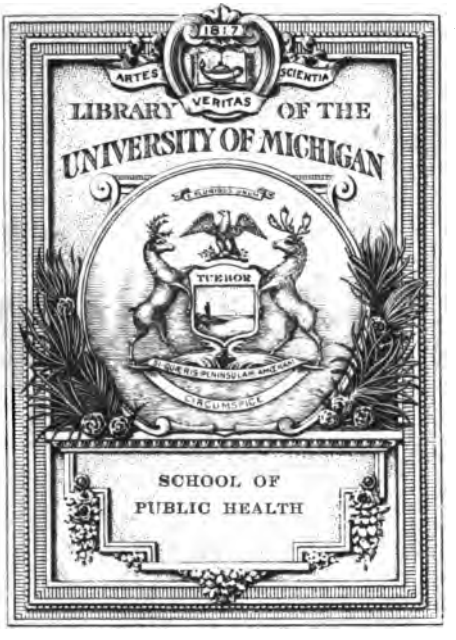
We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

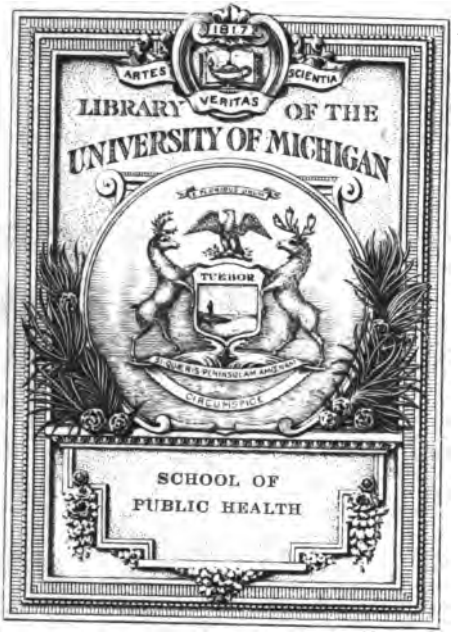
THE
NOT TO
N
A.


1817
ARTES
VERITAS
SCIENTIA
LIBRARY OF THE
UNIVERSITY OF MICHIGAN
TUEBOR
SI QUAERIS PENINSULAM AMOENAM
CIRCUMSPICE
SCHOOL OF
PUBLIC HEALTH

Public Health
RA
87
.B2

THE
~~NOT TO~~
N
A.

1817
ARTES VERITAS SCIENTIA
LIBRARY OF THE
UNIVERSITY OF MICHIGAN
TUEBOR
SI QUAERIS PENINSULAM AMOENAM
CIRCUMSPICE
SCHOOL OF
PUBLIC HEALTH



Public Health
RA
87
.B2

FOURTH ANNUAL REPORT

OF THE

SECRETARY OF STATE

OF THE

STATE OF MICHIGAN, Dept. of health

RELATING TO THE REGISTRY AND RETURN OF

BIRTHS, MARRIAGES, AND DEATHS,

FOR THE YEAR 1870.

BY AUTHORITY.

LANSING, MICH.:
W. S. GEORGE & CO., STATE PRINTERS AND BINDERS.
1872.

PUBLIC HEALTH
MAR 9 45

INTRODUCTORY.

STATE DEPARTMENT, MICHIGAN,
SECRETARY'S OFFICE,
Lansing, July 1st, 1872.

To His Excellency, HENRY P. BALDWIN,
Governor of Michigan:

SIR:—I have the honor to submit herewith the Fourth Annual Report of this Department concerning Births, Marriages, and Deaths, relating to those returned for the year 1870.

This Report has been unavoidably delayed, but this has resulted in allowing it to be made of more than ordinary value. Being for the same year in which the United States census was taken, and the results of the census being now quite well advanced, many comparisons have been possible which will add very materially to the interest and value of these statistics, and which probably would not otherwise have been made until another ten years should have brought another census equally complete.

The work of preparing the tables, including the compilation from the original returns and the necessary computations, has been performed in this office under the direction of the same competent Superintendent as last year, and with a facility and expedition obtainable only by practical experience. But from the necessity of the case, statistical reports of so elaborate a kind cannot be made ready for publication, with a proper regard to accuracy and economy, without the expenditure of

greater time than is needful for the preparation of ordinary documents.

While it is believed that the law providing for the collection of these statistics has met with quite general approval as a whole, and that the statistics are gradually becoming more accurate, without doubt the law may still be improved in some particulars, and the following amendments are respectfully suggested.

Under the present method of collecting births and deaths, after the year in which they occurred has passed, many which occur in the first part of the year seem to escape collection. It would, therefore, enhance the value of these statistics, if births and deaths were recorded soon after their occurrence, as is now the case with marriages. It might be made the duty of every person acting as physician or midwife, or in any way having charge of births or deaths, to furnish for record with the county clerk a written statement of all the facts connected therewith required by law. It might also be made the duty of parents, or eldest person next of kin, to record births and deaths immediately after their occurrence, as is required by law in the State of Massachusetts. The combination of these methods of recording with the present method of collecting by special inquiry after the year has passed, would doubtless result in the collection of many which are now omitted, and in greater accuracy of details concerning all collected. As the statistics are for the benefit of society at large, the people of the State should pay for their collection; individuals who place them upon record should not, therefore, pay for recording them.

The law should require a statement of the age, at last birth-day, of the parents of all children born. This item of knowledge is wanted by statisticians in order to prosecute inquiries in social science of importance to the people.

The age, at last birth-day, of persons married should be collected; as also the facts concerning each person married as to whether it be the first or subsequent marriage.

For several reasons the nativity of parents of all who die would be a valuable addition to the stock of knowledge collected. One important question to be answered thereby is the relative vigor and stamina of the children of native and foreign parents. It has been charged that the native Americans are not self-supporting, but dependent upon the larger birth-rate of the foreign element to maintain the population. This question can only be satisfactorily answered by collecting the information mentioned above, and comparing it with similar knowledge of the population living. If the parent-nativity of all who die were thoroughly collected, this comparison could now be made,—the parent-nativity of the whole population having been collected in the late United States census of 1870.

The occupation of fathers of deceased children should be obtained for all below a certain age, which might be that of fifteen years.

County clerks should return to this department the Christian names of children previously returned without such names, whenever they shall have obtained them. Compensation therefor might be the same as for any similar return. Many county clerks have made such returns, although not required by law. Very general care has evidently been exercised by a majority of the county clerks, supervisors, and others charged with the collection of these statistics. Considering the difficult nature of the work, there is cause for congratulation that the labor has been so faithfully performed.

The proper management of these statistics in this department, including, as is required by the law, the preparation of "such tabular statements, results, and deductions as will render them of practical utility," calls for the services of an experienced statistician, who should be a physician of recognized ability and standing in the profession. The law should provide compensation corresponding with its requirements.

The collection and compilation of the statistics included

in this Fourth Annual Report have been under the immediate supervision of Dr. H. B. Baker, of the State Medical Society, to whom belongs the credit of whatever of merit it may possess. Having a peculiar fitness for this kind of work, to which he has given much valuable time, I acknowledge myself under many obligations to him for his services, and regret that under the law I am unable to better compensate him therefor. Very respectfully,

DANIEL STRIKER,
Secretary of State.

CONTENTS.

PAGE.

Introductory, letter of transmittal, ... ii.-vi.
General remarks and statements, ... xiii., xx.
Births, Marriages, and Deaths in the State during the year, etc.—Table I., . . xiv.
Condensed statements concerning inhabitants, births, marriages, and deaths—Exhibit A, ... xiv.
Population, births, marriages, deaths, and excess of births, by counties—Table II., ... xv.-xix.
Note by the compiler, ... xxi.

BIRTHS,

Total number during the year, ... 1
Average of, during specified periods within the year, ... 1
By quarters of the year, for 1868, 1869, and 1870—Table I., ... 1
Comments on Table I., ... 2
Births for April, 1868, not all represented, ... 2
Diagram No. 1, ... 3
By months in order by number, for years 1868, 1869, and 1870—Table II., . . . 3
Comments on Table II., ... 8
Uniformity of births at different seasons of the year, ... 3-4
Relation between births and marriages, by months—Table III., ... 5
Relation between births and marriages, by months, in Kentucky in 1853—Exhibit, ... 6
Comments on preceding table and exhibit, ... 6
Relation between births and marriages, ... 7
Influence of climate on birth-rate, ... 8
By State, county, sex, and months—Table IV., ... 10
Counties and townships from which no returns of births were received,—foot-notes to Table IV., ... 10-23
Color, sex, population, birth-rate by sex and color, proportion of each sex, and number of inhabitants to one child born of same color—Table V., . . . 24
Comments on Tables V. and VI., ... 25
Proportion of each sex the same in births as in population, ... 25
By State and counties, and by sex, the population, birth-rate, and color—Table VI., ... 26
Nativity of parents, ... 34
America said to be unfavorable to natural growth of population, ... 34
Statistics collected by Dr. Hitchcock, ... 36
Size of families of native and foreign born inhabitants, ... 36
Parent-nativity of those who die, should be collected, ... 37
Cost and value of offspring of different races, ... 38
Parent-nativity of children, nativity of population, and birth-rate of native and foreign parents—Table VII., ... 39
Parent-nativity of children born in 1869—Exhibit A, ... 40

PAGE.
Parent-nativity of native-born inhabitants—Exhibit B, ... 40
Parent-nativity of total population—Exhibit C, ... 41
Comments on Table VII. and Exhibits A, B, and C, ... 41
Native population includes children of foreign parents, ... 41
By State, counties, and sex, the parent-nativity of children born, the number of males to 100 females, and the per cent of each sex—Table VIII., ... 43
Twins, by sex and by months—Table IX. and remarks, ... 51
Parent-nativity of twins—Table X., ... 52
Parent-nativity of twins born of parents natives of the same and of different States and countries—Table XI., ... 53
Twins, by State, counties, sex, and parent-nativity—Table XII., ... 54
Occupation of fathers of twins—Table XIII., ... 62
Still-births, by sex, months, and parent-nativity—Table XIV., ... 63
By sex, the parent-nativity of still-births, and the proportion born of parents of same and of different States or countries—Table XV., ... 64
Remarks concerning still-births, proportion of each sex, etc., ... 65
Illegitimate, by sex, months, and parent-nativity—Table XVI., ... 67
Illegitimate, parent-nativity, number by sex, per cent of each nativity by sex, and number of males to 100 females—Table XVII., ... 68
Female population of State and counties aged 16 to 45; number of such population to one birth, to one illegitimate, and to one pair of twins; also, the number of illegitimate and still-born, and the number of males to 100 females among twins, and the per cent of births to females aged 16 to 45—Table XVIII., ... 69
Triplets, by counties, months, color, sex, birth-place, and occupation of parents—Table XIX., ... 72
Comments on Table XIX., ... 72
Sex of children, ... 73
Births, by sex, by months of uniform length—Exhibit D, ... 73
Births by months of uniform length, excluding unknown months and unknown sex—Exhibit E, ... 74
Proportion of each sex among twins, ... 74
Diagram No. 2, ... 74
Proportion of each sex among illegitimate children, ... 75
Relation, by months, between the conceptions, and the proportion of each sex conceived—Table XX., ... 75
Relation, by months, between deaths and conceptions—Table XXI., ... 76
Relation between deaths and proportion of each sex conceived—Table XXII., 77
Comments on the two preceding tables, ... 77
Essential nature of reproduction, and universal law of, ... 79

MARRIAGES,

Total number of, during the year, ... 81
Average number of, during specified periods, ... 81
Correction of, for previous years, ... 81
Omissions in returns of, ... 81-82
By quarters of the year for 1868, 1869, and 1870—Table I., ... 83
By quarters of the year for 1868, 1869, and 1870, as originally returned—Exhibit A, ... 83
By months, arranged in order by number, for 1868, 1869, and 1870—Table II., . 84
Not all returned for 1870, ... 84

PAGE.

Diagram No. 3, ... 84
Deficiency of returns of, for April, 1868, ... 85
For 1869, by months of equal length—Exhibit B, ... 85
For 1870, by months of equal length—Exhibit C, ... 86
General laws controlling the proportion of, by seasons of the year, ... 86
Some reasons why there are more marriages at certain seasons, ... 87
For the State and counties, by months—Table III., ... 88
Number of, and number of persons married, by color, sex, and per cent to total, and per cent to population of same color and sex—Table IV., ... 91
By State, counties, and color—Table V., ... 92
Comments on Table V., ... 94
By sex, the nativity of persons married, population represented by marriages, per cent of each nativity, and, to population of same nativity—Table VI. . 95
By sex, the ages of persons married, per cent at each age to total, and to population, and the population at marriageable ages—Table VII., ... 96
For the State and counties, by sex, the nativity and the age in periods of years—Table VIII., ... 97
Counties from which no returns were received,—note, ... 102
For the State and counties, by sex, the number married aged under 21, and the number at each age under 21—Table IX., ... 103
Quotation from laws in regard to solemnization of marriages, as to age, etc., . 105
The number of each sex married at each period of age, and the manner of their union by age in periods of years—Table X., ... 106
Diagram No. 4, ... 106
Greatest number of persons married at any period of age, ... 107
With great disparity of age, giving occupation of bridegroom—Table XI., . . 108
For State and counties for 1868, 1869, and 1870, as first returned, and with subsequent additions thereto; number of inhabitants to one marriage, and per cent of marriages to population—Table XII., ... 110
Exchange of vital statistics with foreign countries and the States of the Union, 113
Remarks upon Exhibit D, ... 113
Number of inhabitants to one marriage in different foreign countries and States of the Union—Exhibit D, ... 114

DEATHS,

Remarks, general and special, ... 115–118
State Boards of Health, ... 117
Deficient returns of births and deaths in first part of year, ... 8, 118, 122–3
Total number of, and average number per quarter, month, week, and day, . . 119
Deaths by quarters of the year for 1868, 1869, and 1870—Table I., ... 119
Order of mortality by quarters of the year, ... 120
Diagram No. 5, ... 121
Deaths by months, arranged in order by number of, for 1868, 1869, and 1870—Table II., ... 121
Specified causes of increased number of deaths in August and September, . 121
Deaths bear a fixed relation to the seasons of the year, ... 122
Greatest mortality earlier, and births later by one month than in 1868–9 . . 122
Order of mortality by months, in Massachusetts, in Kentucky, and in Michigan—Exhibit A, ... 124
Unequal return of deaths in different parts of the year, ... 125

PAGE.
Number and per cent of deaths of each sex, by months—Table III., ... 126
Deaths by months, arranged in order of proportion of males, ... 126-127
Deaths by sex, and total for the year and months made of uniform length, per cent of deaths in each month, per cent and excess of per cent of each sex—Exhibit B, ... 128
Diagrams Numbers 6 and 8, ... 128-129
By sex, the deaths and death-rate by ages, excess of deaths and death-rate at different ages, per cent of deaths at each age and of each sex—Table IV., . . 129
Proportion of deaths under five, excess of males under one, etc., ... 132
Proportion of each sex the same among those who die, as in the population, . 132
By sex, and by age in periods of years, the number of deaths and the death-rate for the year, and for each month—Table V., ... 133
Months, in order by number of deaths at each period of age—Exhibit C, . 138
Deaths and death-rate by sex and by age, in twelfths of a year under one, and in years over one, for the year, and for each month—Table VI., ... 140
Remarks on Exhibit C, and Tables V. and VI., ... 166
Number of children born during a year, number of annual deaths at each age in months, number left living at each age, and per cent of deaths at each age to all living to enter upon the same age—a life table, based upon the death-rate and birth-rate for 1870—Exhibit D, ... 168
Death-rate immediately preceding and succeeding important ages, ... 169
Importance of Mortality Statistics as bearing upon life insurance, ... 169-171
"American Experience Table," with a column showing the expectation of life, by a new method—Exhibit E, ... 172
Life Table based upon the death-rate in Michigan in 1870—"Expectation of Life," etc.,—Table VII., ... 174
Remarks upon Table VII., ... 176
Length of a generation, stationary population, etc., ... 177
Expectation of Life, ... 178-181
Survivors at certain ages out of 1,000,000 born in certain foreign countries and in this State—Exhibit F, ... 182
Constant population sustained by 1,000,000 annual births, ... 183
Deaths of those aged 100 and over—Table IX, ... 184
The number of deaths by sex for State and counties, for the year and months, and by age in periods—Table VIII., ... 185
Deaths and death-rate by color and sex, and per cent of each sex; also, population by sex and color—Table X., ... 201
For the State, and counties, by sex, the color of all who died—Table XI, . 202
Remarks upon Table XI., ... 206
For the State and counties, by sex, the nativity of all who died—Table XII., 207
Remarks on Table XIII., ... 209
Comparative death-rate of native and foreign inhabitants, ... 209
Parent nativity of all who die should be collected, ... 209
For State and counties, by sex, the nativity of population, and the death-rate of native and foreign inhabitants—Table XIII., ... 210

CAUSES OF DEATH,

Order of succession of the tables and remarks, ... 215
Classification of the causes of death, ... 215
Deaths from all causes, and from each class of causes, and per cent of deaths from each class of causes—Table XIV., ... 216

PAGE.
Counties contained in geographical divisions of the State—Exhibit G, . . . 217
Counties and townships from which no returns of deaths were received, . . . 217
Death-rate from all causes, and proportion of deaths from each class of causes for the State and geographical divisions—Table XV., ... 218
Remarks on Table XV., ... 218
Death-rate in each geographical division, and per cent of deaths from each class of causes during the year 1869—Exhibit H, ... 219
Deaths in State, and in each county, by causes of death classified—Table XVI., . 220
Causes of deaths arranged alphabetically,—deaths by sex, by months, 1870, and by ages in periods, and for the years 1870 and 1869—Table XVII., ... 256
Remarks on Table XVII., "actual causes of death" to be sought for, . . . 285
Details concerning fifteen principal causes of deaths arranged in order by number—Table XVIII., ... 286
Deaths from ten specified causes, by sex, months, and ages, in periods of years—Table XIX., ... 288
Deaths from ten specified causes, by sex, months, and ages—Table XX., . . . 289
Remarks on Tables XIX.-XX., ... 290
Cancer, cephalitis, croup, and diphtheria,—remarks upon, ... 290-299
Amount of vapor in cubic foot of air at 98° F., ... 295
Suggestion to meteorological observers, ... 297
Deaths from croup, by months in order of number, with certain meteorological conditions—Exhibit I, ... 300
Deaths from croup and diphtheria, by months, with certain meteorological conditions—Exhibit J, ... 302
Deaths from diphtheria, by months, with certain meteorological conditions—Exhibit K, ... 303
Deaths from diarrhea and dysentery in eleven geographical divisions of State—Table XXI., ... 304
Remarks on dysentery, measles, scarlatina, typhoid fever, whooping cough, casualties, etc., ... 305-307
Remarks upon consumption, ... 287, 308
Diagram No. 7, ... 309
Deaths from consumption by sex, by months of equal length—Exhibit L, . 309
Pneumonia, remarks upon, ... 309
Correlation of consumption and pneumonia, by months—Table XXII., . . 310
Deaths from consumption, by months, with some meteorological conditions—Exhibit M, ... 312
Deaths from pneumonia, by months, with some meteorological conditions—Exhibit N, ... 313
Number of deaths and death-rate from consumption, by sex, for different ages, in years and periods of years—Table XXIII, ... 314
Diagram No. 9, ... 314
Consumption and pneumonia, ... 315
Correlation of consumption and pneumonia, by ages in periods—Table XXIV, 316
Number, death-rate, and persons living to one death, for deaths from all causes, from consumption, pneumonia, and typhoid fever, by sex, in each of eleven geographical divisions—Table XXV., ... 318
Eleven geographical divisions of the State in order of mortality from all causes, and from typhoid fever—Exhibit O, ... 322
Correlation of consumption and pneumonia in eleven geographical divisions of State—Exhibit P, ... 323

PAGE.

Number, per cent to population, and persons living to one death, for deaths from all causes, from consumption, pneumonia, and typhoid fever, for State and counties—Table XXVI., ... 324
Correlation of consumption and pneumonia, ... 328-331
Number, per cent to population of same age, and persons living to one death, for deaths at all ages, from old age, all aged 70 and over, and all aged under 5, in each of the eleven divisions—Table XXVII., ... 332
The eleven divisions of the State arranged in order of mortality of all aged under 5, and all aged over 70—Exhibit Q, ... 336
Number, per cent to population, and number of persons living to one death, for deaths at all ages, from old age, and all aged 70 and over, and all aged under 5, and the average age of inhabitants in the State and counties—Table XXVIII., ... 337
For the year and months, by sex, the conjugal condition, occupation, and age, in periods of years, of all who died from consumption—Table XXIX., . . . 342
Comments on Table XXIX., ... 360
Population, married and single, not stated in U. S. census, ... 360
Average age of living and dead, by census and registration returns—Exhibit R, 360
Rule for obtaining average age, ... 360
Occupation of those who died, and the aggregate and average years of life in each occupation—Table XXX., ... 361
Meteorological conditions, by months, for 1870, at Lansing—Table XXXI., . 368
Meteorological conditions, by months, for 1870, at Lansing—Table XXXII., . 369
Acknowledgment to Prof. R. C. Kedzie and to State Board of Agriculture, . 301, 369
Meteorological conditions, by months, for 1870, at Monroe—Table XXXIII., . 370
Meteorological conditions, by months, for 1870, at Ontonagon—Table XXXIV., 371
Acknowledgment to Miss F. E. Whelpley for meteorological table, ... 371
Meteorological conditions, by months, for 1870, at Northport—Table XXXV., 372
Meteorological conditions, by months, for 1870, at Alpena—Table XXXVI., . 373
Acknowledgment to Smithsonian Institution for meteorological tables, . . 373
Meteorological conditions, by months, for 1870, at Grand Rapids—Table XXXVII, ... 374
Laws concerning the solemnization of marriages, ... 376
Act to provide for the registration of births, marriages, and deaths, ... 379

CORRECTIONS AND EXPLANATIONS.

Page 69, heading to Table XVIII., line 4, for "one twin child," read, one pair of twins, etc.

In Table XVIII, the townships from which no returns of births were received are not indicated. They are shown in foot-notes to Table IV., pages 10-28.

Page 114, foot-note *d*, for "not yet returned," read, not yet all returned.

Page 174, heading to Table VII., line 4, for "from 1 to 112," read, from birth to 112, etc. Also, in same table, first figure in first column, for "1," read—1. It is correct in all except a few copies.

Page 217, Exhibit G, in the last column, the county "Calhoun" should be followed by reference letter *e*.

Page 295, in second line of second paragraph, after "18.69 grains," read, in each cubic foot.

"Exhibit D," page 168, will perhaps be better understood by some if it be considered as a "Life Table" for each sex, and for both sexes under one year of age, based upon the death-rate in Michigan in 1870, and calculated upon the same number of annual births as in this State during that year. The "Number Living to enter upon each Age," applies throughout the year, and is not limited to any day or month of the year.

FOURTH REGISTRATION REPORT.

FOR THE YEAR 1870.

BIRTHS, MARRIAGES, AND DEATHS.

The returns of births, marriages, and deaths for the year 1870 were apparently more complete and perfect than for any previous year. Notwithstanding this the number of births was less than for 1869, and the number of marriages, although greater than was first returned for that year, did not equal those for 1869 as increased by the number for that year included with returns for 1870. Without doubt the number for 1870 will in like manner be increased hereafter, more especially by marriages solemnized during the last three months of the year. See Diagram No. 3 and Table II., page 84.

More deaths were returned than for any previous year, and as this was true in other States where the system of registration is well established, it was probably not all due to increased accuracy in the returns. The specified causes of death to which this increase was due may be seen in Table XVII.

On page 118 it is stated that a more complete discussion of the subject of deficient registration of births and deaths which occur in the first part of the year, will be found in the introduction. As some of the evidence was afterwards given on pages 122 to 125, it appears unnecessary to do more in this connection than refer to the pages above mentioned.

TABLE I.

The Number of Marriages, Births, and Deaths, and Excess of Births over Deaths in the State of Michigan during the year, and the Average Number and Excess during Specified Periods of Time within the year 1870.

PERIODS OF TIME.	Marriages.	Births.	Deaths.	Excess of Births over Deaths. *a*
Year 1870	9,160.00	26,663.00	10,766.00	15,858.00
Quarter	2,290.00	6,665.75	2,691.50	3,964.50
Month	763.33	2,221.91	897.17	1,321.50
Week	176.15	512.75	207.03	304.96
Day	25.09	72.99	29.47	43.41

a Thirty-nine births, in counties from which no returns of deaths were received, not included.

EXHIBIT A.

Statements concerning Births, Marriages, and Deaths in Michigan during the year 1870.

	NUMBER.
Inhabitants represented by returns of marriages to one marriage *a*	127.08
In population represented by marriages, males to one marriage	66.22
In population represented by marriages, females to one marriage	60.80
Male inhabitants at ages at which marriages occurred to one marriage	44.60
Female inhabitants at ages at which marriages occurred to one marriage	39.89
Inhabitants represented by births to each child born	43.43
Inhabitants, males to each male child born	43.59
Inhabitants, females to each female child born	43.57
Inhabitants, females aged 16 to 45 to each child born	9.35
Children born to 100 females aged 16 to 45	10.68
Inhabitants represented by deaths to one death	107.13
Inhabitants, males to one death of male	107.48
Inhabitants, females to one death of female	107.50
Deaths, males to 100 females	108.73
Births, males to 100 females	108.80
Total population of State, males to 100 females	109.22
Births to one death	2.47
Births, males to one death of male	2.47
Births, females to one death of female	2.47
Children born of which the sex was unknown or not stated	91.00
Deaths of which the sex was unknown or not stated	87.00

a See page 114.

TABLE II.

Exhibiting, by Sex, the Population, the Number of Marriages, Births, and Deaths, and the Excess of Births over Deaths, in Michigan, during the Year 1870.

STATE AND COUNTIES.	Population.			Marriages.	Births.				Deaths.				Excess of Births Over Deaths. a			
		Sex.				Sex.				Sex.				Sex.		
	Total.	Males.	Females.		Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Unknown.
State	1,184,282	618,251	566,031	9,160	26,663	13,846	12,726	91	10,766	5,589	5,140	37	15,858	8,241	7,563	54
Alcona	696	393	303	8	27	11	16	.....	6	2	4	.....	21	9	12	....
Allegan	32,105	17,000	15,105	277	644	329	315	.....	260	134	125	1	384	195	190	—1
Alpena b	2,756	1,719	1,037	6	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	....
Antrim	1,985	1,118	867	16	59	33	26	.....	12	8	4	.....	47	25	22	....
Barry	22,200	11,646	10,554	169	466	256	209	1	180	100	79	1	286	156	130	....
Bay	15,900	8,914	6,986	125	480	256	222	2	155	84	71	.....	325	172	151	2
Benzie	2,184	1,168	1,016	18	62	32	28	2	23	13	10	.....	39	19	18	2
Berrien	35,104	18,063	17,041	288	661	328	332	1	276	144	132	.....	385	184	200	1

a Thirty-nine births in counties from which no returns of deaths were received, not included. The figures with the minus sign placed before them, indicate the excess of deaths over births.

b No returns of deaths.

TABLE II.—CONTINUED.

COUNTIES.	Population.			Marriages.	Births.				Deaths.				Excess of Births over Deaths. *a*			
		Sex.				Sex.				Sex.				Sex.		
	Total.	Males.	Females.		Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Unknown.
Branch	26,227	13,248	12,979	265	499	247	252	.....	226	113	113	.....	273	134	139	....
Calhoun *b*	36,571	18,550	18,021	280	746	377	364	5	414	214	197	3	332	163	167	2
Cass	21,096	10,938	10,158	188	437	244	191	2	220	118	101	1	217	126	90	1
Charlevoix	1,724	941	783	18	34	17	17	.....	15	10	5	.....	19	7	12	....
Cheboygan *c*	2,197	1,235	962	14	34	13	21	.....	.....	.....	.....	.....	.....	.....	.....	....
Chippewa	1,690	930	760	13	57	22	35	.....	29	10	19	.....	28	12	16	....
Clare *d e*	366	285	81	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....
Clinton	22,851	11,813	11,038	177	564	281	282	1	241	117	123	1	323	164	159	....
Delta *f*	2,441	1,486	955	21	79	41	38	.....	39	19	20	.....	40	22	18	....
Eaton	25,163	12,949	12,214	211	588	288	300	.....	205	93	112	.....	383	195	188	....
Emmet	1,211	629	582	11	46	29	17	.....	44	25	19	.....	2	4	—2	....
Genesee	33,895	17,449	16,446	306	657	343	314	.....	242	113	128	1	415	230	186	—1
Grand Traverse	4,443	2,389	2,054	20	104	61	43	.....	28	21	7	.....	76	40	36	....
Gratiot	11,808	6,189	5,619	74	300	150	150	.....	116	55	61	.....	184	95	89	....

Hillsdale	31,688	16,104	15,584	820	604	303	301	.....	270	135	134	1	334	168	167	—1
Houghton *e*	13,882	7,745	6,137	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....
Huron	9,048	5,036	4,012	72	301	155	146	.....	64	29	35	.....	237	126	111	....
Ingham	25,268	13,096	12,172	208	488	257	229	2	230	123	107	.....	258	134	122	2
Ionia	27,675	14,452	13,223	211	587	309	266	12	271	129	137	5	316	180	129	7
Iosco	3,163	1,904	1,259	28	93	43	50	.....	26	13	13	.....	67	30	37	....
Isabella	4,113	2,211	1,902	37	109	57	52	.....	31	12	19	.....	78	45	33	....
Jackson	36,040	19,056	16,984	214	614	303	309	2	287	163	124	.....	327	140	185	2
Kalamazoo	32,065	16,522	15,543	330	658	358	299	1	307	157	148	2	351	201	151	—1
Kalkaska *d*	424	244	180	.....	15	6	9	.....	3	2	1	.....	12	4	8	....
Kent	50,410	26,166	24,244	399	1,089	528	544	17	513	265	247	1	576	263	297	16
Keweenaw *e*	4,206	2,327	1,879	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....
Lake *d*	548	305	243	.....	6	4	2	.....	4	.....	4	.....	2	4	—2	....
Lapeer	21,342	11,051	10,291	184	447	228	218	1	149	81	68	.....	298	147	150	1
Leelanaw	4,577	2,401	2,176	29	134	59	75	.....	41	19	22	.....	93	40	53	....
Lenawee	45,601	22,916	22,685	393	830	437	392	1	341	181	159	1	489	256	233	....
Livingston	19,335	10,072	9,263	108	478	256	218	4	163	89	72	2	315	167	146	2
Mackinac *g*	1,715	905	810	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....

a Thirty-nine births in counties from which no returns of deaths were received, not included. The figures with the minus sign placed before them, indicate the excess of deaths over births.
b No returns of births or deaths from township of Battle Creek.
c No returns of deaths.
d Counties organized in 1871.
e No returns of births, marriages, or deaths.
f No returns of births or deaths from townships of Delton and Masonville.
g No returns of births or deaths.

TABLE II.—CONTINUED.

COUNTIES.	Population.			Marriages.	Births.				Deaths.				Excess of Births over Deaths. *a*			
		Sex.				Sex.				Sex.				Sex.		
	Total.	Males.	Females.		Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Unknown.
Macomb	27,619	14,096	13,523	206	607	313	293	1	208	113	95	.....	399	200	198	1
Manistee	6,074	3,458	2,616	81	215	109	106	.....	69	41	28	.....	146	68	78	....
Manitou *b*	891	488	403	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....
Marquette	14,278	8,485	5,793	145	675	353	320	2	266	138	127	1	409	215	193	1
Mason	3,266	1,814	1,452	25	76	39	36	1	20	11	9	.....	56	28	27	1
Mecosta	5,645	3,061	2,584	56	199	107	92	.....	70	32	38	.....	129	75	54	....
Menominee	1,895	1,266	629	4	13	6	6	1	4	1	2	1	9	5	4	....
Midland	3,283	1,813	1,470	29	123	70	53	.....	45	26	19	.....	78	44	34	....
Missaukee *c d*	130	76	54	1	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	....
Monroe *e*	27,475	13,950	13,525	204	621	334	286	1	274	143	131	.....	347	191	155	1
Montcalm	13,641	7,284	6,357	90	323	158	162	3	127	65	61	1	196	93	101	2
Muskegon	14,892	8,402	6,490	101	349	189	160	.....	159	85	70	4	190	104	90	—4
Newaygo	7,292	3,910	3,382	47	132	58	74	.....	35	10	25	.....	97	48	49	....
Oakland	40,906	21,135	19,771	311	563	305	258	.....	255	126	129	.....	308	179	129	....

Oceana	7,222	3,948	3,274	54	177	104	73	.....	99	51	48	.....	78	53	25	....
Ogemaw *	12	9	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....
Ontonagon	2,846	1,430	1,416	9	111	60	51	.....	16	8	8	.....	95	52	43	....
Osceola	2,104	1,167	937	14	75	37	38	.....	10	7	3	.....	65	30	35	....
Oscoda †	70	48	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....
Ottawa	26,650	14,050	12,600	180	727	399	322	6	261	149	112	.....	466	250	210	6
Presque Isle *d f*	355	229	126	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....
Saginaw *g*	39,098	21,064	18,034	309	970	504	466	.....	382	202	180	.....	588	302	286	....
Sanilac	14,565	7,722	6,843	91	439	232	205	2	103	50	53	.....	336	182	152	2
Schoolcraft *d*	799	519	280	2	17	10	7	.....	8	4	4	.....	9	6	3	....
Shiawassee	20,822	10,815	10,007	114	401	208	190	3	138	72	65	1	263	136	125	2
St. Clair	36,759	19,011	17,748	285	1,036	538	502	1	299	154	144	1	737	379	358	....
St. Joseph	26,272	13,480	12,792	231	501	263	238	.....	193	102	91	.....	308	161	147	....
Tuscola	13,715	7,268	6,452	97	291	170	120	1	84	41	43	.....	207	129	77	1
Van Buren	28,885	14,907	13,928	208	606	322	283	1	259	133	126	.....	347	189	157	1
Washtenaw	41,440	21,478	19,962	288	721	376	345	.....	311	157	154	.....	410	219	191	....
Wayne	119,068	59,964	59,104	919	3,670	1,910	1,746	14	1,628	871	749	8	2,042	1,039	997	6
Wexford	650	344	306	5	23	13	10	.....	12	6	6	.....	11	7	4	....

a Thirty-nine births in counties from which no returns of deaths were received, not included. The figures with the minus sign placed before them, indicate the excess of deaths over births.
b No returns of births, marriages, or deaths.
c No returns of deaths.
d Counties organized in 1871.
e No returns of births or deaths from township of Ida.
f Returns by County Clerk, but no marriages recorded up to October 3, 1871. No births or deaths reported to him. He thinks one birth occurred.
g No returns of births or deaths from township of Chesaning.
* Part of Iosco. † Attached to Alcona.

In this report an attempt has been made to avoid technical terms, as much as possible, and to render the material as immediately accessible as could well be done to all the people, professional and otherwise. This has seemed to require especial effort, in order to present precise scientific statements, and at the same time convey the ideas in popular language. This report should, undoubtedly, consist mainly of statistical contributions to the study of the anthropological branch of biology, and should not, therefore, be expected to supply immediately finished treatises on points established, and as such published to the people. It is, necessarily, a collection of evidence which should be united with the knowledge obtained by physicians, biologists, and students of social science, from other sources, for the purpose of forming correct conclusions upon the profound problems which are to be worked out concerning the best conditions for healthy and happy life. The management of these statistics, then, should be analogous to the management of researches in physical science, and should require similar talent, and patient, watchful care in combining facts to form results as is needful in combining chemical reagents to ascertain the manner of their reactions, the conditions of their formation, stability, combinations, or destruction. In dealing with births, marriages, and deaths, we have to do with the formation, combination, stability, and destruction of human beings.

It is believed that it will eventually be found advisable to combine with the management of vital statistics a central sanitary supervision, and then to divide this combination into two parts, making the collection, compilation, and combination of this knowledge one more branch of physical science,—many of the immediate results being published in the technical language of the profession, and circulating only among statisticians or professional people; only the practical teaching derived from the combination of knowledge thus brought together being published to the people at large; the gen-

eral results, and warnings as to how to avoid death from general causes, in a regular annual report, and the special warnings concerning epidemics, or special atmospheric conditions, in a manner perhaps similar to that in which danger from storms is now published by the meteorological division of the United States signal corps.

NOTE BY THE COMPILER.

In behalf of the committee of the State Medical Society on Vital Statistics, the compiler desires to congratulate the people of the State upon the successful inauguration of a system of Registration of Births, Marriages, and Deaths. It may have been thought by some that the passage of the law was a certain indication of success in the collection of these important statistics, and that practical deductions would necessarily follow; but, judging from the experience of other States, this was not at all certain. In the State of New York an excellent law was passed, but it has never been properly executed. In the Twelfth Registration Report of Vermont, the compiler remarks that, "For the first time in the history of Registration in the State of Vermont, the Summary of Observations now made is based upon returns from every town in the State. For this result we are indebted to the determination and energy of the excellent Secretary of State." As a rule, those States in which there is the greatest intellectual activity have been most successful in such enterprises. Massachusetts has an excellent system of Registration, and Michigan has reason to be proud of the intelligent faithfulness of the officers who have been charged with the collection of these statistics; and especially is credit due the State Department, upon the energetic and persevering action of which the success of the system of Registration in this State has so greatly depended.

BIRTHS.

The total number of births returned as having occurred in the State of Michigan during the year 1870 was 26,663.

The average number of births during specified periods of time was as follows:

Average number per quarter	6,665.75
Average number per month	2,221.91
Average number per week	512.75
Average number per day	73.04

The actual number and per cent of births returned which occurred in each quarter of the year, is shown in Table I., which also allows of comparison, by number and per cent of total, with each quarter in the two preceding years.

TABLE I.

Births, by Quarters of the Year, showing the number and per cent of totals, for the Years 1868, 1869, and 1870.

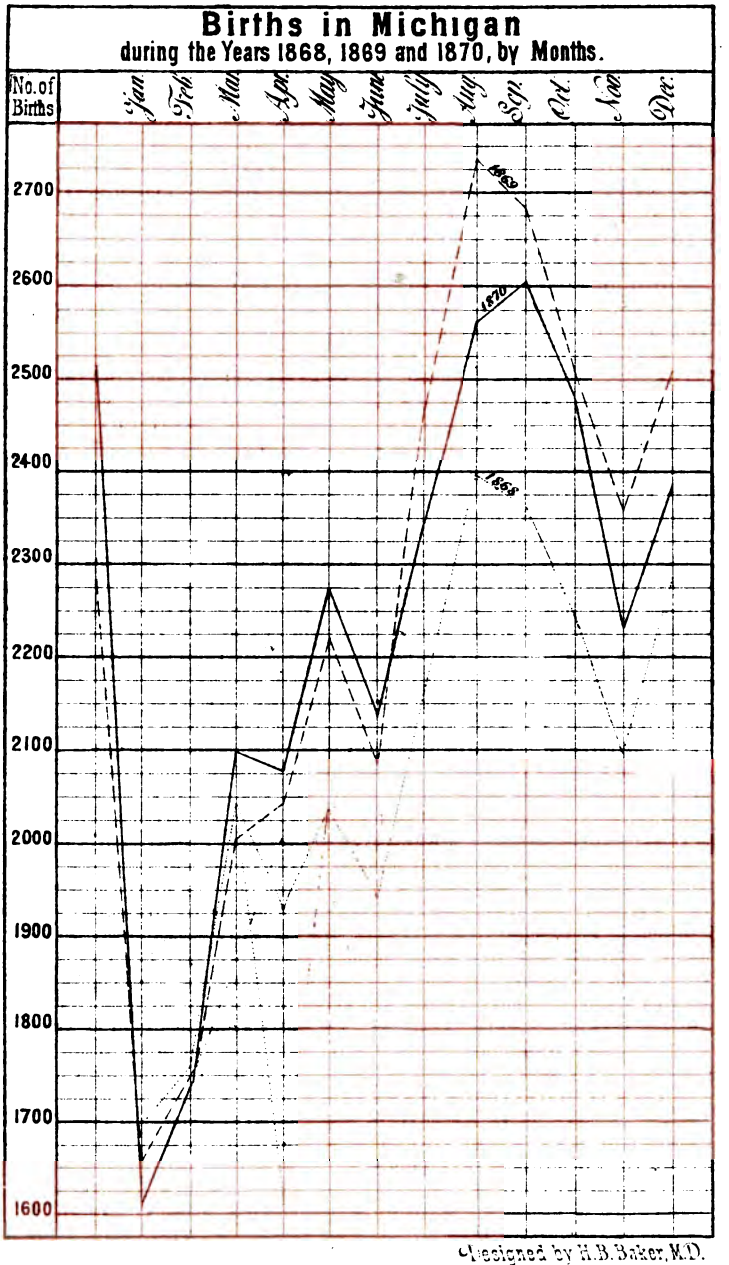
QUARTERS ENDING WITH.	1868.		1869.		1870.	
	Number.	Per cent of total.	Number.	Per cent of total.	Number.	Per cent of total.
March	5,501	21.98	5,415	19.98	5,440	20.40
June	[a]5,909	23.61	6,348	23.43	6,491	24.34
September	6,924	27.67	7,883	29.09	7,500	28.12
December	6,628	26.49	7,381	27.24	7,100	26.62
Unknown	[a]58	.23	66	.24	132	.49
Total	25,020	100.00	27,093	100.00	26,663	100.00
Average [b]	6,255	25.00	6,774	25.00	6,665	25.00

[a] See notes to month of April and Unknown, in Table II.
[b] The number in unknown quarter of year included.

The order of greatest number of births by quarters of the year was the same in 1870 as in the two preceding years; the greatest number occurring in the third, then the fourth, second, and least of all in the first quarter. This was precisely the order in which they were reported in Massachusetts in 1869, and is similar to the order in which they usually occur in that State, although the number sometimes regularly increases until the last quarter. In this State, as in Massachusetts, a much greater number occur in the two last, than in the two first quarters. The birth-rate for the different seasons of the year can be more closely studied by referring to Table II., which shows the number in each month for the years 1868, 1869, and 1870. For the more ready comparison of the rate in each year, the months have been arranged in order by number, the one in which the greatest number occurred first in every case.

In any given section of country the proportion of births in each part of the year is nearly the same in every year. This is found to be true in this State, so far as records have been collected, as will be readily seen by Table II., and is perhaps more forcibly shown by Diagram No. 1. In the line in the diagram representing births in 1868, there appeared to be an exception in the month of April. This led to further examination, when it was found that the number of births in April, 1868, stated in the Second Registration Report, only represented twenty-five days, the births in the first five days having been omitted in some way, because the first collection year was made by law to end April 5th, and the year 1868 to begin at that time. By adding births for five days at the same rate shown for the twenty-five days, the number is increased to 1,928, which is something near the proportion for April in the other two years. The line for births, 1868, on Diagram No. 1, shows the births for that month as first compiled, and also with this estimated correction.

DIAGRAM No. 1.



Designed by H. B. Baker, M.D.

TABLE II.

Births by Months, arranged in order, by Number, for the Years 1868, 1869, and 1870.

Order.	1868.			1869.			1870.		
	Months.	No.	Per ct. of Total	Months.	No.	Per ct. of Total	Months.	No.	Per ct. of Total
	Total	25,020	100.00	Total	27,098	100.00	Total	26,668	100.00
1	August	2,399	9.58	August	2,731	10.08	Sept	2,602	9.75
2	Sept	2,362	9.44	Sept	2,681	9.89	August	2,559	9.59
3	Dec	2,283	9.12	Dec	2,512	9.27	October	2,480	9.30
4	Oct	2,246	8.97	Oct	2,508	9.22	Dec	2,387	8.95
5	July	2,163	8.64	July	2,471	9.12	July	2,339	8.77
6	Nov	2,099	8.38	Nov	2,361	8.71	May	2,275	8.53
7	March	2,043	8.16	May	2,221	8.19	Nov	2,233	8.37
8	May	2,037	8.10	June	2,085	7.69	June	2,140	8.02
9	June	1,944	7.76	April	2,042	7.53	March	2,099	7.87
10	April [a]	1,928	7.70	March	2,005	7.40	April	2,076	7.73
11	Feb	1,759	7.03	Feb	1,752	6.46	February	1,737	6.51
12	January	1,699	6.79	January	1,658	6.11	January	1,604	6.01
	Unk'n [b]	58	.23	Unkn'n	66	.24	Unkn'n	132	.49
	Average	2,085	8.33	Average	2,257.75	8.33	Average	2,221.91	8.33

[a] The number of births in April, 1868, as published in the Second Registration Report, was 1,607; but this number only represented twenty-five days, as will be explained elsewhere. Thirty days, at the same rate, would give the number stated in this Table.

[b] This number was obtained by adding three-twelfths of the number of births in unknown months stated in the First Registration Report, to the whole number stated in the second Report, which was for the remaining nine months of the year 1868.

An interesting question has been discussed by statisticians, as to the controlling causes of the nearly constant proportion of births in the various seasons. Dr. Derby, who has had editorial charge of the Registration Reports of Massachusetts since 1865, concludes that "It does not seem to depend upon physiological causes, as in the lower animals, but rather upon custom, religious observances, and occupations. The great number of marriages which take place in Massachusetts about Thanksgiving and in the early winter, doubtless influence it."

Again, in the Report for 1870, in explanation of the cause of the greater number of births in the last two quarters of the year, he says: "The enforced separation of husbands from their wives at certain seasons of the year, in order that the occupations of seamen, of fishermen, of laborers, etc., may be pursued, are still operative." He is influenced in forming and maintaining these opinions, by the fact that in England, during the seven years, 1860 to 1866, inclusive, 51.7 per cent of the annual births occurred in the first half of the year. Even though the relation between the seasons be different in different countries, the uniformity of proportion of births in each season in the same locality indicates the action of fixed natural laws, which can be determined by sufficient comparison and study of statistics, collected for a proper length of time. Whether the causes be mainly physiological or sociological, they are evidently acting year after year, and their expression can therefore, in all probability, be reduced to general laws.

In searching for the prominent cause of this uniformity of birth-rate by seasons of the year, the first comparison suggested is with the time of the greatest and least number of marriages. If to the bottom of Diagram No. 2 there be added the months of conception, beginning with April under the first line for January, and placing the months following in the natural order, ending with March under the line for December, the births can then be compared by months of conception with the monthly marriages shown in Diagram No. 3. The birth-rate being uniform by seasons of the different years, if the greater or less than average proportion at certain seasons is mainly dependent upon the marriage-rate, that also must be uniform by seasons, and correspond in some way by proportionate number with the months of conception. Diagram No. 3 shows that the marriage-rate for different years in this State is remarkably uniform by months. The exceptions to uniformity there shown for the first part of the year 1868, and for the last part of the year 1870, were without doubt due to deficient

returns, as will be explained when commenting upon marriages. The degree of correspondence between the marriage-rate by proportion per month, and the fruitful conceptions for births in Michigan for the one year 1870, may be seen by referring to Table III.

TABLE III.

Showing, by numbers, the relation between Births in Michigan during the Year 1870, and the Marriages solemnized in the Months of 1869 and 1870, in which the Conceptions probably occurred. (Births of Unknown Sex, and in Unknown Months, and Marriages in Unknown Months, excluded.)

Births for 1870, Equalized to Months of 30.44 Days each.		Conceptions.		No. of Marriages from April, 1869, to March, 1870 (equalized to months of 30.44 days each).
Months.	Number.	Months.	Year.	
Year	26,445			10,317
September	2,681	December	1869	1,186
August	2,501	November	"	1,062
October	2,428	January	1870	[a] 808
December	2,382	March	"	[a] 806
July	2,288	October	1869	999
November	2,261	February	1870	[a] 853
May	2,222	August	1869	[a] 799
Average	2,204			860
June	2,166	September	1869	[a] 894
April	2,102	July	"	809
March	2,056	June	"	686
February	1,884	May	"	806
January	1,574	April	"	769

[a] Exceptions to statement that more than an average number of marriages are solemnized in months having more than an average number of conceptions, and less than an average number of marriages in months in which less than an average number of conceptions occur.

EXHIBIT—BIRTHS IN KENTUCKY IN 1853.

Showing, by numbers, the relation between the Births and the Marriages solemnized in the Months of the Year 1853, corresponding to Months in 1852–3 in which the Conceptions probably occurred.

BIRTHS IN KENTUCKY FOR THE YEAR 1853, EQUALIZED.[a]		CONCEPTIONS.		Marriages 1853, equalized[a] opposite mo's of conceptions in 1852–3.[c]
Months.	Number.	Months.	Year.	
Year	25,046			5,102
December	2,747	March	1853	656
November	2,294	February	"	592
September	2,192	December	1852	516
October	2,155	January	1853	604
August	2,128	November	1852	435
Average	2,087			425
February	2,072	May	1852	378
March	2,022	June	"	[b] 435
April	2,008	July	"	314
May	1,925	August	"	316
June	1,876	September	"	304
July	1,861	October	"	276
January	1,776	April	"	346

[a] Equalized to months of 31 days each.
[b] Exception to rule that greatest number of marriages were solemnized in months in which the greatest number of conceptions occurred, and least number of marriages in months in which the least number of conceptions occurred.
[c] As the compiler is only in possession of these statistics for Kentucky for the single year 1853, the marriages for that year have been used in place of those solemnized in corresponding months in 1852. If the marriages are uniform by seasons, this will not materially affect the comparison.

It will be seen by Table III. that in a majority of cases less than an average number of marriages occurred in months in which less than an average number of conceptions occurred; but out of the seven months in which more than an average number of conceptions occurred, in only three months were

there more than the average number of marriages. Taking the twelve months together, there were five exceptions to this rule of similarity of proportion, these being in the months of January, February, March, August, and September. The exceptions were not for alternate months, and do not otherwise support any idea that more or less than an average number of conceptions may have resulted from more or less than an average number of marriages in the month immediately preceding the one observed.

Examining the relation between births and marriages by number, it will be noticed at once that the number of births greatly exceeds the marriages, as regards total number and in every month. We also conclude that the 427 more than an average number of births in September, 1870, could not have resulted from the 276 more than average number of marriages in December, 1869. Neither could the 630 less than average number of births in January have been in any great proportion dependent upon the 91 less than average number of marriages in April, 1869.

Taking the statistics as they stand, it appears plain, then, from Table III., first, that the uniform proportion of births by seasons is in a majority of months influenced by the number of marriages; second, that, for the reason that the excess or deficit in the number of births compared with the average number is larger than the excess or deficit of marriages for the months in which the conceptions occurred, compared with the average number of marriages, it would appear that the marriage-rate is not—to say the least—the only cause of the uniform excess or deficiency of births at different seasons of the year; third, taking the two foregoing propositions together, it seems that both the marriage and the birth rate are to some extent dependent upon the same cause, which, although not manifest here, it is altogether probable is a physiological one, and directly connected with climate or season of the year. In addition to the evidence of this furnished by Diagrams Nos.

1 and 3, it may be well to take a broader view, and accept a little general evidence of the influence of climate upon the birth-rate.

The following quotation is from page XLIV., introduction to volume of "Mortality and Miscellaneous Statistics," U. S. Census of 1860: "It will be seen that by Tables P and R there is a larger proportion of the living and of mortality in childhood at the South than at the North, and that this increase of these ratios of both living and dying is, in the Atlantic States, progressive from the North to the South. All these States are old; all have been settled for several generations,—long enough to have a due proportion of those living in the extreme ages." Making allowances for the disturbing elements of different times of settlement, migration, etc., the same law was found to hold in the Middle and Western States. As bearing upon the subject, it is also interesting to notice that, although the birth-rate appears to be higher South than North, the greatest proportion of the conceptions, in Kentucky at least, seem to occur in about the same months as in Michigan, although not precisely in the same order. The "Exhibit of Births in Kentucky in 1853" has been prepared to show this, and otherwise to stand as a supplement to Table III.

Unless there is some deficiency in the collection of these statistics in this State, which acts regularly in the same manner each year, the exceptions shown by Table III. in the months of January, February, March, August, and September, seem to show that in some months the birth-rate is greater or less, notwithstanding the influence of the marriage-rate in a contrary direction at the time the conceptions occur. This discussion is important mainly because of an immediate influence on both the marriage and the birth rate, which is generally understood so far as marriages are concerned, but which does not seem to have been mentioned in connection with births; it is the will of persons who may or may not choose to marry or become parents, as the case may be, at any given season of the year.

If it be ascertained that for physiological reasons it will conduce much more to the health and happiness of the parties concerned if marriages or births occur at certain seasons of the year, the slight considerations which are now frequently allowed to control these events may be overborne by that knowledge, and a greater degree of health and happiness result.

TABLE IV.

EXHIBITING by Counties, and by Sex, the number of Children Born during the Year, and in each Month of the Year, ending December 31, 1870 (Still-births included).

STATE AND COUNTIES.	SEX.	YEAR 1870.	MONTHS.												
			January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November	December.	Unknown.
State	Total	26,663	1,604	1,737	2,099	2,076	2,275	2,140	2,339	2,559	2,602	2,480	2,233	2,387	182
	Males	13,846	844	918	1,099	1,108	1,161	1,085	1,244	1,323	1,348	1,296	1,152	1,197	71
	Females	12,726	758	815	995	964	1,102	1,050	1,087	1,224	1,244	1,177	1,076	1,178	56
	Unknown	91	2	4	5	4	12	5	8	12	10	7	5	12	5
Alcona	Total	27	.....	.....	3	3	3	2	3	2	4	2	.....	5	.....
	Males	11	.....	.....	.....	1	1	2	2	.....	2	2	.....	1	.....
	Females	16	.....	.....	3	2	2	.....	1	2	2	.....	.....	4	.....
Allegan	Total	644	45	31	44	55	51	53	50	64	73	69	49	58	2
	Males	329	25	21	23	28	25	28	27	30	39	30	22	29	2
	Females	315	20	10	21	27	26	25	23	34	34	39	27	29	.....
Alpena	Total	3	.....	1	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
	Males	3	.....	1	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
	Females	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Antrim	Total	59	2	2	2	8	6	3	1	10	9	3	5	8	.....
	Males	33	.....	2	1	6	5	1	1	3	5	3	3	3	.....
	Females	26	2	.....	1	2	1	2	.....	7	4	.....	2	5	.....
Barry	Total	466	28	32	39	34	37	35	45	49	44	53	36	34	.....
	Males	256	12	21	21	21	21	23	22	27	21	25	22	20	.....
	Females	209	16	11	18	13	16	12	23	22	23	28	13	14	.....
	Unknown	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Bay	Total	480	34	36	42	31	34	35	37	54	44	47	31	55	.....
	Males	256	15	18	26	20	12	23	26	32	15	22	15	32	.....
	Females	222	19	18	16	11	21	12	11	22	29	25	15	23	.....
	Unknown	2	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....	.....
Benzie	Total	62	5	8	4	4	7	4	7	5	4	2	1	9	2
	Males	32	2	5	4	1	1	3	5	2	2	2	.....	4	1
	Females	28	2	3	.....	3	6	1	2	3	2	.....	1	4	1
	Unknown	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Berrien	Total	661	33	46	52	66	56	60	58	48	66	59	56	61	.....
	Males	328	20	21	26	29	29	31	34	26	29	30	22	31	.....
	Females	332	13	25	26	37	27	29	23	22	37	29	34	30	.....
	Unknown	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
Branch	Total	499	29	38	29	38	38	37	55	51	53	41	42	48	.....
	Males	247	15	18	14	20	21	23	27	24	29	20	17	19	.....
	Females	252	14	20	15	18	17	14	28	27	24	21	25	29	.....

TABLE IV.—CONTINUED.

STATE AND COUNTIES.	SEX.	YEAR 1870.	MONTHS.												
			January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November.	December.	Unknown.
Calhoun [a]	Total	746	47	50	64	69	69	63	50	71	70	60	66	66	1
	Males	377	26	24	25	42	36	32	27	40	29	31	31	33	1
	Females	364	21	26	39	27	33	31	22	28	41	29	35	32	.....
	Unknown	5	.....	.....	.....	.....	.....	.....	1	3	.....	.....	.....	1	.....
Cass	Total	437	25	37	39	36	33	19	35	52	46	47	32	35	1
	Males	244	15	17	20	24	20	11	23	30	27	26	18	13	.....
	Females	191	10	19	18	12	13	8	12	22	19	21	14	22	1
	Unknown	2	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Charlevoix	Total	34	4	1	3	1	1	4	3	5	3	2	4	3	.....
	Males	17	1	.....	1	1	.....	3	2	2	3	1	2	1	.....
	Females	17	3	1	2	.....	1	1	1	3	.....	1	2	2	.....
Cheboygan	Total	34	1	.....	3	3	2	5	2	4	2	3	2	7	.....
	Males	13	1	.....	1	1	1	3	1	.....	1	2	1	1	.....
	Females	21	.....	.....	2	2	1	2	1	4	1	1	1	6	.....

Chippewa	Total	57	8	10	4	4	2	2	5	2	8	5	5	2	.....
	Males	22	2	3	1	3	1	1	4	.....	3	.....	3	1	.....
	Females	35	6	7	3	1	1	1	1	2	5	5	2	1	.....
Clare[b]	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clinton	Total	564	31	33	36	49	52	41	48	37	59	66	54	54	4
	Males	281	18	15	20	27	23	24	16	17	33	28	28	30	2
	Females	282	13	18	16	22	29	17	32	20	26	38	26	23	2
	Unknown	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Delta[c]	Total	79	6	6	2	7	12	12	3	4	7	2	10	8	.....
	Males	41	2	3	1	2	7	10	1	1	4	2	5	3	.....
	Females	38	4	3	1	5	5	2	2	3	3	.....	5	5	.....
Eaton	Total	588	31	36	43	52	51	46	59	60	57	57	41	55	.....
	Males	288	13	17	19	32	28	23	37	28	26	23	26	16	.....
	Females	300	18	19	24	20	23	23	22	32	31	34	15	39	.....
Emmet	Total	46	8	6	4	2	2	5	1	3	6	2	3	4	.....
	Males	29	7	1	3	2	1	3	1	3	2	2	2	2	.....
	Females	17	1	5	1	.....	1	2	.....	.....	4	.....	1	2	.....
Genesee	Total	657	32	46	45	47	56	67	66	57	52	61	61	67	.....
	Males	343	18	26	29	20	25	34	36	32	22	32	34	35	.....
	Females	314	14	20	16	27	31	33	30	25	30	29	27	32	.....

[a] No returns from township of Battle Creek. [b] No returns; organized in spring of 1871. [c] No returns from townships of Delton and Masonville.

TABLE IV.—Continued.

STATE AND COUNTIES.	Sex.	Year 1870.	Months.												
			January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November.	December.	Unknown.
Grand Traverse	Total	104	7	7	7	14	5	6	10	12	12	8	7	8	1
	Males	61	4	4	5	7	4	.....	6	8	7	5	5	5	1
	Females	43	3	3	2	7	1	6	4	4	5	3	2	3	.....
Gratiot	Total	300	13	15	30	19	24	23	25	35	38	25	24	29	.....
	Males	150	7	10	16	7	7	13	15	16	16	14	15	14	.....
	Females	150	6	5	14	12	17	10	10	19	22	11	9	15	.....
Hillsdale	Total	604	27	23	44	45	55	40	61	60	65	62	58	64	.....
	Males	303	12	11	18	21	28	19	36	28	35	33	26	36	.....
	Females	301	15	12	26	24	27	21	25	32	30	29	32	28	.....
Houghton[d]	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Huron	Total	301	15	30	35	21	25	30	23	17	32	25	28	19	1
	Males	155	8	14	22	9	13	14	12	11	13	14	14	11	.....
	Females	146	7	16	13	12	12	16	11	6	19	11	14	8	1

Ingham	Total	488	24	31	38	49	34	40	46	39	55	44	37	49	2
	Males	257	13	18	24	28	16	22	25	21	23	24	17	25	1
	Females	229	11	13	14	20	18	18	21	18	31	20	20	24	1
	Unknown	2	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....
Ionia	Total	587	28	40	46	58	54	45	57	55	72	47	52	33	5
	Males	309	15	21	26	25	29	22	29	26	46	26	24	18	2
	Females	266	12	18	19	27	24	23	28	26	26	19	28	14	2
	Unknown	12	1	1	1	1	1	.....	.....	3	.....	2	.....	1	1
Iosco	Total	98	9	6	5	4	10	11	13	11	9	4	8	3	.....
	Males	48	6	1	3	2	4	6	6	3	5	1	5	1	.....
	Females	50	3	5	2	2	6	5	7	8	4	3	3	2	.....
Isabella	Total	109	4	6	3	8	17	9	9	10	14	6	9	14	.....
	Males	57	2	3	1	3	10	2	6	5	7	4	4	10	.....
	Females	52	2	3	2	5	7	7	3	5	7	2	5	4	.....
Jackson	Total	614	24	35	43	48	54	58	45	72	61	66	56	51	1
	Males	303	9	17	24	27	22	20	24	40	28	36	31	24	1
	Females	309	15	18	19	21	31	38	21	32	33	29	25	27	.....
	Unknown	2	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....

[d] No returns until too late to be included.

TABLE IV.—Continued.

State and Counties.	Sex.	Year 1870.	Months.												
			January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November.	December.	Unknown.
Kalamazoo	Total	658	44	44	48	52	58	60	55	58	62	65	58	52	2
	Males	358	23	24	28	30	31	25	33	36	32	39	31	24	2
	Females	299	21	20	20	22	27	35	22	22	29	26	27	28	.....
	Unknown	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Kalkaska	Total	15	.....	.....	1	.....	1	1	1	3	2	2	1	3	.....
	Males	6	.....	.....	1	.....	.....	1	.....	1	2	.....	.....	1	.....
	Females	9	.....	.....	.....	.....	1	.....	1	2	.....	2	1	2	.....
Kent	Total	1,089	63	49	85	90	107	86	89	113	138	99	71	99	.....
	Males	528	31	24	41	53	41	36	38	55	67	56	39	47	.....
	Females	544	32	25	42	36	63	48	50	57	70	41	31	49	.....
	Unknown	17	.....	.....	2	1	3	2	1	1	1	2	1	3	.....
Keweenaw	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lake	Total	6	1	1	.....	1	.....	.....	1	.....	1	.....	1	.....	.....
	Males	4	.....	.....	.....	1	.....	.....	1	.....	1	.....	1	.....	.....
	Females	2	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Lapeer	Total	447	28	38	26	44	58	40	27	37	45	40	35	27	2
	Males	228	14	19	12	24	28	18	10	17	29	22	19	14	2
	Females	218	14	19	14	20	29	22	17	20	16	18	16	13	.....
	Unknown	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Leelanaw	Total	134	10	4	8	7	15	16	19	12	9	10	8	16	.....
	Males	59	6	2	2	2	7	6	11	4	5	5	3	6	.....
	Females	75	4	2	6	5	8	10	8	8	4	5	5	10	.....
Lenawee	Total	830	43	41	77	64	70	69	76	61	87	89	82	69	2
	Males	437	20	20	37	32	38	37	53	29	47	48	40	35	1
	Females	392	23	21	40	32	32	32	23	32	40	40	42	34	1
	Unknown	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Livingston	Total	478	31	35	42	46	40	40	30	48	53	33	35	43	2
	Males	256	19	18	22	30	23	20	12	25	29	17	18	23	.....
	Females	218	12	17	20	16	17	20	18	23	23	16	15	19	2
	Unknown	4	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2	1	.....
Mackinac*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Macomb	Total	607	43	47	45	41	53	55	49	67	54	54	47	50	2
	Males	313	23	27	21	27	21	34	20	27	28	29	27	27	2
	Females	293	20	20	24	14	32	20	29	40	26	25	20	23	.....
	Unknown	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....

*No returns.

TABLE IV.—CONTINUED.

STATE AND COUNTIES.	SEX.	YEAR 1870.	MONTHS. January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November.	December.	Unknown.
Manistee	Total	215	8	16	24	19	16	18	17	22	20	19	18	23	.....
	Males	109	5	9	10	11	4	7	8	9	11	13	8	14	.....
	Females	106	3	7	14	8	12	6	9	13	9	6	10	9	.....
Manitou	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Marquette	Total	675	34	37	42	45	64	63	53	71	69	67	63	66	1
	Males	353	16	22	24	28	34	28	27	42	28	34	32	38	.....
	Females	320	18	15	18	17	30	35	26	29	41	33	31	26	1
	Unknown	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
Mason	Total	76	2	5	1	7	6	9	8	7	9	7	5	10	.....
	Males	39	2	3	1	2	4	3	6	1	7	4	2	4	.....
	Females	36	.....	2	.....	5	2	6	2	6	2	3	3	5	.....
	Unknown	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Mecosta	Total	199	6	15	17	14	19	14	20	25	18	18	17	16	.....
	Males	107	3	11	13	8	8	6	11	14	9	7	10	7	.....
	Females	92	3	4	4	6	11	8	9	11	9	11	7	9	.....

Menominee	Total	13	2	.....	2	1	1	1	1	.....	.....	3	1	1	.....
	Males	6	1	.....	1	1	.....	.....	.....	.....	.....	1	1	1	.....
	Females	6	1	.....	1	.....	1	1	1	.....	.....	1	.....	.....	.....
	Unknown	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Midland	Total	128	9	4	5	9	15	13	14	13	11	11	9	10	.....
	Males	70	5	3	3	5	8	10	6	8	5	6	6	5	.....
	Females	58	4	1	2	4	7	3	8	5	6	5	3	5	.....
Missaukee	Total	2	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....
	Males	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Females	2	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....
Monroe [f]	Total	621	29	42	42	54	55	41	50	64	58	57	59	69	1
	Males	334	18	21	26	26	29	21	23	36	36	26	29	42	1
	Females	286	11	21	16	28	26	20	27	28	21	31	30	27	.....
	Unknown	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Montcalm	Total	323	17	16	24	24	39	31	27	30	29	33	22	30	1
	Males	158	10	8	15	12	24	14	11	11	18	13	8	14	.....
	Females	162	7	8	9	12	14	16	16	19	11	20	14	16	.....
	Unknown	3	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	1
Muskegon	Total	349	16	19	25	20	28	26	36	42	43	33	32	28	1
	Males	189	10	13	13	12	18	7	16	26	20	19	17	17	1
	Females	160	6	6	12	8	10	19	20	16	23	14	15	11	.....

[e] No returns.

[f] No returns from township of Ida.

TABLE IV.—Continued.

State and Counties.	Sex.	Year 1870.	Months.												
			January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November.	December.	Unknown.
Newaygo	Total	132	5	3	6	11	14	22	17	12	9	13	8	11	1
	Males	58	3	.....	3	5	8	7	8	7	3	8	2	3	1
	Females	74	2	3	3	6	6	15	9	5	6	5	6	8	.....
Oakland	Total	563	24	31	46	46	53	43	57	62	49	58	52	42	.....
	Males	305	17	15	21	27	25	23	30	34	28	35	34	16	.....
	Females	258	7	16	25	19	28	20	27	28	21	23	18	26	.....
Oceana	Total	177	4	9	10	19	20	12	17	16	17	20	17	16	.....
	Males	104	4	5	6	13	12	9	5	10	9	14	11	6	.....
	Females	73	.....	4	4	6	8	3	12	6	8	6	6	10	.....
Ontonagon	Total	111	5	9	8	11	11	11	7	13	7	14	7	8	.....
	Males	60	3	4	5	5	7	5	4	9	6	6	4	2	.....
	Females	51	2	5	3	6	4	6	3	4	1	8	3	6	.....
Osceola	Total	75	6	4	3	4	7	8	9	9	8	3	7	7	.....
	Males	37	4	2	2	2	6	4	4	5	2	1	1	4	.....
	Females	38	2	2	1	2	1	4	5	4	6	2	6	3	.....

Ottawa	Total	727	40	50	69	60	56	51	69	62	77	65	61	60	7
	Males	399	20	26	40	38	34	32	34	38	42	37	33	31	4
	Females	322	20	24	29	27	20	19	33	29	34	28	28	28	3
	Unknown	6					2		2		1			1	
Presque Isle [h]															
Saginaw [i]	Total	970	65	68	89	77	95	67	70	92	81	96	81	84	5
	Males	504	30	32	49	35	45	35	37	47	50	54	40	48	2
	Females	466	35	36	40	42	50	32	33	45	31	42	41	36	3
Sanilac	Total	439	14	23	44	41	39	53	39	29	47	55	24	31	
	Males	232	5	9	25	18	24	29	23	12	27	35	11	14	
	Females	205	9	14	19	23	14	24	16	16	20	20	13	17	
	Unknown	2					1			1					
Schoolcraft	Total	17		4	1	1		1	2	1	2	2		3	
	Males	10		3		1				1	2	1		2	
	Females	7		1	1			1	2			1		1	
Shiawassee	Total	401	26	25	35	24	33	32	41	46	32	31	40	36	
	Males	208	9	13	15	13	19	17	20	29	17	18	19	19	
	Females	190	17	12	20	11	14	15	20	17	13	13	21	17	
	Unknown	3							1		2				

[g] No returns from the township of Brooks. [h] Blank return from County Clerk, but no births reported to him. [i] No returns from township of Chesaning.

TABLE IV.—CONTINUED.

STATE AND COUNTIES.	SEX.	YEAR 1870.	MONTHS. January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November.	December.	Unknown.
St. Clair	Total	1,036	79	63	86	70	78	71	93	111	102	87	94	101	1
	Males	533	47	29	42	39	38	30	53	44	57	43	59	52	.....
	Females	502	32	34	44	31	40	41	40	67	44	44	35	49	1
	Unknown	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
St. Joseph	Total	501	29	35	49	41	30	47	49	48	46	46	42	39	.....
	Males	263	15	23	27	24	20	23	24	24	23	22	21	17	.....
	Females	238	14	12	22	17	10	24	25	24	23	24	21	22	.....
Tuscola	Total	291	14	18	24	19	43	26	34	33	28	17	18	17	.....
	Males	170	10	11	12	9	21	12	19	20	18	10	15	13	.....
	Females	120	4	7	12	10	21	14	15	13	10	7	3	4	.....
	Unknown	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Van Buren	Total	606	44	51	42	45	60	39	56	69	47	57	51	45	.....
	Males	322	25	27	21	26	34	20	27	43	24	30	22	23	.....
	Females	283	19	24	21	19	26	19	29	25	23	27	29	22	.....
	Unknown	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....

Washtenaw	Total	721	37	39	57	58	50	72	59	60	73	74	72	68	2
	Males	376	19	24	29	26	30	40	27	29	36	44	38	32	2
	Females	345	18	15	28	32	20	32	32	31	37	30	34	36	.....
Wayne	Total	3,670	305	280	306	240	251	250	325	329	299	331	316	357	81
	Males	1,910	158	159	157	118	130	129	188	177	156	161	158	177	42
	Females	1,746	147	119	148	121	121	120	135	149	142	170	158	180	36
	Unknown	14	.....	2	1	1	.....	1	2	3	1	.....	.....	.....	3
Wexford	Total	23	1	.....	.....	1	.....	2	4	4	5	2	2	1	1
	Males	13	1	.....	.....	1	.....	1	3	3	2	.....	1	1	.....
	Females	10	.....	.....	.....	.....	.....	1	1	1	3	2	1	.....	1

TABLE V.

Showing, by Color and by Sex, the Population June 1st, 1870; the number of Births in the State of Michigan during the Year 1870; the Per Cent of Births to Population; and the Per Cent of each Sex to Total Number Born of both Sexes (Still-births included).

COLOR AND SEX.		Total Population.[a]	Total Births.	Per Cent of Births to Population.	Per Cent of each Sex to Total of both Sexes.	No. of Inhabitants to One Child Born of the same Color.
All Colors	Total	1,158,166	26,668	2.302	.....	43.43
	Male	608,655	13,846	2.298	52.10	.....
	Female	554,511	12,726	2.294	47.89	.....
	Unkn'wn	.....	91	.....	.....	.....
White	Total	1,141,186	25,955	2.274	.....	43.96
	Male	594,776	13,458	2.262	52.01	.....
	Female	546,410	12,415	2.272	47.98	.....
	Unkn'wn	.....	82	.....	.....	.....
Black	Total	5,509	203	3.684	.....	27.13
	Male	3,032	113	3.726	55.94	.....
	Female	2,477	89	3.593	44.05	.....
	Unkn'wn	.....	1	.....	.....	.....
Mulatto	Total	6,155	3	.048	.....	2,051.66
	Male	3,106	3	.096	100.00	.....
	Female	3,049	.....	.....	.....	.....
Indian	Total	5,316	139	2.614	.....	38.24
	Male	2,741	67	2.444	48.20	.....
	Female	2,575	72	2.796	51.79	.....
Unknown Colors	Total	.....	363	.....	.....	.....
	Male	.....	205	.....	57.74	.....
	Female	.....	150	.....	42.25	.....
	Unkn'wn	.....	8	.....	.....	.....
Black and Mulatto[b]	Total	11,664	206	1.766	.....	56.62
	Male	6,138	116	1.889	56.58	.....
	Female	5,526	89	1.610	43.41	.....
	Unkn'wn	.....	1	.....	.....	.....

[a] Except of counties and townships from which no returns of births were received.
[b] Includes all of African descent.

Table V. indicates that the birth-rate of Indians is greater than it is among the white inhabitants of the State, while the birth-rate of persons of African descent is smaller. This is regarded as only possibly true; the census may not have included as large a proportion of the Indians as of the blacks and mulattoes, and the statement of color, in the returns of births by the supervisors, is not yet so perfect as to inspire very full confidence in this item. It seems quite probable that the proportion of each sex may be correct. It will be seen that 56 per cent of the children of African descent, 52 per cent of the white children, and only 48 per cent of the children of Indians, were males. This evidence appears to be reliable. It would be more useful towards establishing the causes of the sex of offspring, if we could be certain as to the true birth-rate of each race.

Table VI., with its numerous notes of explanation, shows plainly that the material of which it was constructed was not sufficiently good to make either Table VI. or V. as satisfactory as it ought to be concerning the blacks and mulattoes; but it is hoped that the tables and comments will serve to show supervisors some of the uses which it ought to be possible to make of the statements of color, and induce them to be more explicit in their returns, which should specify the color as "White," "Black," "Mulatto," "Indian," "White and Indian," etc., as the case may be, and should not contain any such indefinite terms as "Colored." It will also be seen from Table VI., that, taking the State as a whole, the births correspond to the population by sex. Whether this birth-rate by sex would maintain the same proportion of each sex in the population, as at present, is a much more complicated question, which requires, for its solution, the death-rate at the various ages.

TABLE VI.

Showing, for the State and Counties, by Sex, the Population, Per Cent of Births to Population, and Number of Births by Color, during the Year ending December 31st, 1870 (Still-births included).

State and Counties.	Sex.	Population, June 1st, 1870.*	Per cent of Births of each Sex to Population of same Sex.	Color. Total of all Colors.	White.	Black.	Mulatto.	Indian.	Unknown.	Remarks.
State	Totals	1,158,166	2.302	26,668	25,955	208	3	139	363	a 31 African & 58 Col'd. b 24 African & 46 Col'd. c 14 White & Indian. d 21 White & Indian. e African.
	Males	603,655	2.298	13,846	13,458	a 113	3	c 67	205	
	Females	554,511	2.294	12,726	12,415	b 89	....	d 72	150	
	Unknown	.....	.....	91	82	e 1	....	....	8	
Alcona	Totals	† 766	3.52	27	27	....	....	....	....	
	Males	441	2.49	11	11	....	....	....	....	
	Females	325	4.92	16	16	....	....	....	....	
Allegan	Totals	32,105	2.00	644	638	6	....	....	....	
	Males	17,000	1.93	329	328	c 1	....	....	....	c 1 Colored.
	Females	15,105	2.08	315	310	c 15	....	....	....	c 2 Colored.
Alpena	Totals	2,756	.10	3	3	....	....	....	....	
	Males	1,719	.17	3	3	....	....	....	....	
	Females	1,037	.....	.....	.....	....	....	....	....	
Antrim	Totals	1,985	2.98	59	58	....	....	1	....	
	Males	1,118	2.95	33	33	....	....	....	....	
	Females	867	2.99	26	25	....	....	1	....	
Barry	Totals	22,200	2.09	466	462	4	....	....	....	
	Males	11,646	2.19	256	252	c 4	....	....	....	c 2 Colored.
	Females	10,554	1.98	209	209	....	....	....	....	
	Unknown	.....	.....	1	1	....	....	....	....	
Bay	Totals	15,900	3.01	480	427	4	....	5	44	a African. b 1 White & Indian. a African.
	Males	8,914	2.87	256	219	a 3	....	b 2	32	
	Females	6,986	3.17	222	206	a 1	....	3	12	
	Unknown	.....	.....	2	2	....	....	....	....	

* Except of counties and townships from which no returns of births were received.
† Includes unorganized county of Oscoda.

TABLE VI.—CONTINUED.

State and Counties.	Sex.	Population, June 1st, 1870.*	Per cent of Births of each Sex to Population of same Sex.	Color. Total of all Colors.	White.	Black.	Mulatto.	Indian.	Unknown.	Remarks.
Benzie	Totals	2,184	2.83	62	58	2	----	----	2	
	Males	1,168	2.73	32	30	c 2	----	----	----	c Colored.
	Females	1,016	2.75	28	28	----	----	----	----	
	Unknown	--------	------	2	------	----	----	----	2	
Berrien	Totals	35,104	1.88	661	650	11	----	----	----	
	Males	18,063	1.81	328	322	6	----	----	----	
	Females	17,041	1.94	332	327	5	----	----	----	
	Unknown	--------	------	1	1	----	----	----	----	
Branch	Totals	26,227	1.90	499	498	1	----	----	----	
	Males	13,248	1.86	247	247	----	----	----	----	
	Females	12,979	1.94	252	251	a 1	----	----	----	a African.
Calhoun	Totals	35,382	2.10	746	736	9	----	1	----	
	Males	17,901	2.10	377	372	a 5	----	----	----	a 3 African.
	Females	17,481	2.08	364	360	a 3	----	1	----	a 2 African.
	Unknown	--------	------	5	4	a 1	----	----	----	a African.
Cass	Totals	21,096	2.07	437	388	33	----	2	14	
	Males	10,938	2.23	244	215	c 19	----	1	9	c Colored.
	Females	10,158	1.88	191	171	c 14	----	1	5	c 13 Colored.
	Unknown	--------	------	2	2	----	----	----	----	
Charlevoix	Totals	1,724	1.97	34	34	----	----	----	----	
	Males	941	1.80	17	17	----	----	----	----	
	Females	783	2.17	17	17	----	----	----	----	
Cheboygan	Totals	2,197	1.54	34	34	----	----	----	----	
	Males	1,235	1.05	13	13	----	----	----	----	
	Females	962	2.18	21	21	----	----	----	----	
Chippewa	Totals	1,690	3.37	57	25	----	----	32	----	
	Males	930	2.36	22	12	----	----	b 10	----	b 9 White & Indian.
	Females	760	4.60	35	13	----	----	b 22	----	b 15 Wh. & Indian.

* Except of counties and townships from which no returns of births were received.

TABLE VI.—CONTINUED.

Counties.	Sex.	Population, June 1st, 1870.*	Per cent of Births of each Sex to Population of same Sex.	Color. Total of all Colors.	White.	Black.	Mulatto.	Indian.	Unknown.	Remarks.
Clinton	Totals	22,851	2.46	564	564	----	----	----	----	
	Males	11,813	2.37	281	281	----	----	----	----	
	Females	11,038	2.55	282	282	----	----	----	----	
	Unknown	--------	------	1	1	----	----	----	----	
Delta	Totals	1,456	5.42	79	77	----	----	2	----	
	Males	837	4.89	41	41	----	----	----	----	
	Females	619	6.13	38	36	----	----	b 2	----	b White & Indian.
Eaton	Totals	25,168	2.33	588	546	2	----	----	40	
	Males	12,949	2.22	288	264	c 1	----	----	23	c Colored.
	Females	12,214	2.45	300	282	c 1	----	----	17	c Colored.
Emmet	Totals	1,211	3.79	46	1	----	----	45	----	
	Males	629	4.61	29	------	----	----	b 29	----	b 3 White & Indian.
	Females	582	2.92	17	1	----	----	b 16	----	b 2 White & Indian.
Genesee	Totals	33,895	1.93	657	656	1	----	----	----	
	Males	17,449	1.96	343	342	a 1	----	----	----	a African.
	Females	16,446	1.90	314	314	----	----	----	----	
G. Traverse	Totals	4,443	2.34	104	98	----	----	----	6	
	Males	2,389	2.55	61	57	----	----	----	4	
	Females	2,054	2.09	43	41	----	----	----	2	
Gratiot	Totals	11,808	2.54	300	297	2	----	----	1	
	Males	6,189	2.42	150	148	c 1	----	----	1	c Colored.
	Females	5,619	2.66	150	149	c 1	----	----	----	c Colored.
Hillsdale	Totals	31,688	1.90	604	604	----	----	----	----	
	Males	16,104	1.88	303	303	----	----	----	----	
	Females	15,584	1.93	301	301	----	----	----	----	
Huron	Totals	9,048	3.32	301	298	----	----	3	----	
	Males	5,086	3.07	155	153	----	----	2	---	
	Females	4,012	3.63	146	145	----	----	1	----	

* Except of counties and townships from which no returns of births were received.

TABLE VI.—CONTINUED.

Counties.	Sex.	Population, June 1st, 1870.*	Per cent of Births of each Sex to Population of same Sex.	Color. Total of all Colors.	White.	Black.	Mulatto.	Indian.	Unknown.	Remarks.
Ingham	Totals	25,268	1.98	488	486	1	----	----	1	
	Males	13,096	1.96	257	256	----	----	----	1	
	Females	12,172	1.88	229	228	c 1	----	----	----	c Colored.
	Unknown	--------	------	2	2	----	----	----	----	
Ionia	Totals	27,675	2.12	587	584	2	----	----	1	
	Males	14,452	2.18	309	309	----	----	----	----	
	Females	13,223	2.01	266	263	c 2	----	----	1	c Colored.
	Unknown	--------	------	12	12	----	----	----	----	
Iosco	Totals	†3,175	2.92	93	93	----	----	----	----	
	Males	1,913	2.24	43	43	----	----	----	----	
	Females	1,262	3.96	50	50	----	----	----	----	
Isabella	Totals	4,113	2.65	109	109	----	----	----	----	
	Males	2,211	2.57	57	57	----	----	----	----	
	Females	1,902	4.76	52	52	----	----	----	----	
Jackson	Totals	36,040	1.70	614	607	6	----	1	----	a African. b White & Indian.
	Males	19,056	1.59	303	297	a 5	----	b 1	----	
	Females	16,984	1.81	309	303	a 1	----	----	----	
	Unknown	--------	------	2	2	----	----	----	----	
Kalamazoo	Totals	32,065	2.05	658	654	4	----	----	----	
	Males	16,522	2.16	358	356	c 2	----	----	----	c Colored.
	Females	15,543	1.92	299	297	c 2	----	----	----	c Colored.
	Unknown	--------	------	1	1	----	----	----	----	
Kalkaska	Totals	424	3.53	15	15	----	----	----	----	
	Males	244	2.45	6	6	----	----	----	----	
	Females	180	5.00	9	9	----	----	----	----	
Kent	Totals	50,410	2.15	1,089	1,087	1	1	----	----	
	Males	26,166	2.01	528	526	1	1	----	----	
	Females	24,244	2.24	544	544	----	----	----	----	
	Unknown	--------	------	17	17	----	----	----	----	

* Except of counties and townships from which no returns of births were received.
† Includes unorganized county of Ogemaw.

TABLE VI.—CONTINUED.

Counties.	Sex.	Population June 1st, 1870.*	Per cent of Births of each Sex to Population of same Sex.	Color. Total of all Colors.	White.	Black.	Mulatto.	Indian.	Unknown.	Remarks.
Lake	Totals	548	1.09	6	6	----	----	----	----	
	Males	305	1.31	4	4	----	----	----	----	
	Females	243	.82	2	2	----	----	----	----	
Lapeer	Totals	21,342	2.09	447	447	----	----	----	----	
	Males	11,051	2.06	228	228	----	----	----	----	
	Females	10,291	2.11	218	218	----	----	----	----	
	Unknown	.....	.....	1	1	----	----	----	----	
Leelanaw	Totals	4,577	2.92	134	129	----	----	5	----	
	Males	2,401	2.45	59	55	----	----	4	----	
	Females	2,176	3.44	75	74	----	----	1	----	
Lenawee	Totals	45,601	1.82	830	779	5	----	----	46	
	Males	22,916	1.90	437	412	----	----	----	25	
	Females	22,685	1.72	392	366	c 5	----	----	21	c Colored.
	Unknown	.....	.....	1	1	----	----	----	----	
Livingston	Totals	19,335	2.47	478	477	----	----	----	1	
	Males	10,072	2.54	256	256	----	----	----	----	
	Females	9,263	2.35	218	218	----	----	----	----	
	Unknown	.....	.....	4	3	----	----	----	1	
Macomb	Totals	27,619	2.19	607	606	----	1	----	----	
	Males	14,096	2.22	313	312	----	1	----	----	
	Females	13,523	2.16	293	293	----	----	----	----	
	Unknown	.....	.....	1	1	----	----	----	----	
Manistee	Totals	6,074	3.53	215	215	----	----	----	----	
	Males	3,458	3.15	109	109	----	----	----	----	
	Females	2,616	4.02	106	106	----	----	----	----	
Marquette	Totals	14,278	4.72	675	664	4	----	6	1	
	Males	8,485	4.16	358	348	2	----	3	----	
	Females	5,793	5.52	320	315	2	----	3	----	
	Unknown	.....	.....	2	1	----	----	----	1	

* Except of counties and townships from which no returns of births were received.

TABLE VI.—CONTINUED.

Counties.	Sex.	Population, June 1st, 1870.*	Per cent of Births of each Sex to Population of same Sex.	Color. Total of all Colors.	White.	Black.	Mulatto.	Indian.	Unknown.	Remarks.
Mason	Totals	3,266	2.32	76	75	....	....	1	....	
	Males	1,814	2.14	39	39	....	....	....	....	
	Females	1,452	2.47	36	35	....	....	[b] 1	....	[b] White & Indian.
	Unknown	.....	.....	1	1	....	....	....	....	
Mecosta	Totals	5,645	3.52	199	.....	4	....	....	195	
	Males	3,061	3.49	107	.....	[c] 2	....	....	105	[c] Colored.
	Females	2,584	3.56	92	.....	[c] 2	....	....	90	[c] Colored.
Menominee	Totals	1,895	.68	13	13	....	....	....	....	
	Males	1,266	.47	6	6	....	....	....	....	
	Females	629	.95	6	6	....	....	....	....	
	Unknown	.....	.....	1	1	....	....	....	....	
Midland	Totals	3,283	3.74	123	123	....	....	....	....	
	Males	1,813	3.86	70	70	....	....	....	....	
	Females	1,470	3.60	53	53	....	....	....	....	
Missaukee	Totals	130	1.53	2	2	....	....	....	....	
	Males	76	.....	.....	.....	....	....	....	....	
	Females	54	3.70	2	2	....	....	....	....	
Monroe	Totals	26,455	2.34	621	620	1	....	....	....	
	Males	13,405	2.49	334	333	1	....	....	....	
	Females	13,050	2.19	286	286	....	....	....	....	
	Unknown	.....	.....	1	1	....	....	....	....	
Montcalm	Totals	13,641	2.36	323	322	1	....	....	....	
	Males	7,284	2.16	158	158	....	....	....	....	
	Females	6,357	2.16	162	161	1	....	....	....	
	Unknown	.....	.....	3	3	....	....	....	....	
Muskegon	Totals	14,892	2.34	349	349	....	....	....	....	
	Males	8,402	2.24	189	189	....	....	....	....	
	Females	6,490	2.46	160	160	....	....	....	....	

* Except of counties and townships from which no returns of births were received.

TABLE VI.—CONTINUED.

Counties.	Sex.	Population, June 1st, 1870.*	Per cent of Births of each Sex to Population of same Sex.	Color. Total of all Colors.	White.	Black.	Mulatto.	Indian.	Unknown.	Remarks.
Newaygo	Totals	7,292	1.81	182	182	----	----	----	----	
	Males	3,910	1.48	58	58	----	----	----	----	
	Females	3,382	2.18	74	74	----	----	----	----	
Oakland	Totals	40,906	1.37	568	559	4	----	----	----	
	Males	21,135	1.44	305	303	c 2	----	----	----	c Colored.
	Females	19,771	1.30	258	256	c 2	----	----	----	c Colored.
Oceana	Totals	7,222	2.45	177	153	1	----	23	----	
	Males	3,948	2.63	104	90	c 1	----	13	----	c Colored.
	Females	3,274	2.22	73	63	----	----	10	----	
Ontonagon	Totals	2,846	3.90	111	110	----	----	1	----	
	Males	1,430	4.19	60	60	----	----	----	----	
	Females	1,416	3.60	51	50	----	----	1	----	
Osceola	Totals	2,104	3.56	75	75	----	----	----	----	
	Males	1,167	3.17	37	37	----	----	----	----	
	Females	937	4.05	38	38	----	----	----	----	
Ottawa	Totals	26,650	2.72	727	726	1	----	----	----	
	Males	14,050	2.83	399	399	----	----	----	----	
	Females	12,600	2.55	322	321	1	----	----	----	
	Unknown	--------	------	6	6	----	----	----	----	
Saginaw	Totals	37,591	2.58	970	959	6	----	5	----	
	Males	20,290	2.48	504	500	c 3	----	1	----	c 1 Colored.
	Females	17,301	2.69	466	459	3	----	4	----	
Sanilac	Totals	14,565	3.01	439	439	----	----	----	----	
	Males	7,722	3.00	232	232	----	----	----	----	
	Females	6,843	2.99	205	205	----	----	----	----	
	Unknown	--------	------	2	2	----	----	----	----	
Schoolcraft	Totals	799	2.12	17	13	----	----	4	----	
	Males	519	1.92	10	9	----	----	1	----	
	Females	280	2.50	7	4	----	----	b 3	----	b 1 White & Indian.

* Except of counties and townships from which no returns of births were received.

TABLE VI.—CONTINUED.

Counties.	Sex.	Population June 1st, 1870.*	Per cent of Births of each Sex to Population of same Sex.	Color. Total of all Colors.	White.	Black.	Mulatto.	Indian.	Unknown.	Remarks.
Shiawassee	Totals	20,822	1.92	401	400	....	....	....	1	
	Males	10,815	1.92	208	208	....	....	....	....	
	Females	10,007	1.89	190	190	....	....	....	....	
	Unknown	.....	.....	3	2	....	....	....	1	
St. Clair	Totals	36,759	2.80	1,086	1,086	....	....	....	....	
	Males	19,011	2.80	583	583	....	....	....	....	
	Females	17,748	2.82	502	502	....	....	....	....	
	Unknown	.....	.....	1	1	....	....	....	....	
St. Joseph	Totals	26,272	1.90	501	501	....	....	....	....	
	Males	13,480	1.95	263	263	....	....	....	....	
	Females	12,792	1.85	238	238	....	....	....	....	
Tuscola	Totals	13,715	2.12	291	291	....	....	....	....	
	Males	7,263	2.34	170	170	....	....	....	....	
	Females	6,452	1.85	120	120	....	....	....	....	
	Unknown	.....	.....	1	1	....	....	....	....	
Van Buren	Totals	28,885	2.10	606	595	9	....	2	....	
	Males	14,997	2.16	322	317	a c5	....	....	....	a 1 African. c 4 Colored.
	Females	13,928	2.03	283	277	c 4	....	2	....	c Colored.
	Unknown	.....	.....	1	1	....	....	....	....	
Washtenaw	Totals	41,440	1.73	721	705	11	....	....	5	
	Males	21,478	1.75	376	364	c 9	....	....	3	c 8 Colored.
	Females	19,962	1.75	345	341	c 2	....	....	2	c Colored.
Wayne	Totals	119,068	3.08	3,670	3,599	67	1	....	3	
	Males	59,964	3.18	1,910	1,872	ac37	1	....	....	a 18 Afric'n. c 12 Col'd.
	Females	59,104	2.93	1,746	1,716	ac30	....	....	....	a 19 Afric'n. c 9 Colored.
	Unknown	.....	.....	14	11	....	....	....	3	
Wexford	Totals	650	3.50	23	21	....	....	....	2	
	Males	344	3.77	13	11	....	....	....	2	
	Females	306	3.26	10	10	....	....	....	....	

* Except of counties and townships from which no returns of births were received.

NATIVITY OF PARENTS.

The nativity of the parents of children born in this country, is a subject which has lately attracted much attention among statisticians and others interested in questions of social science. The eminent statistician, Dr. Edward Jarvis of Massachusetts, in an article published in the Atlantic Monthly for April, 1872, —afterwards reprinted in pamphlet form,—has undertaken to defend this country from the numerous charges made against it as one unfavorable to natural growth of population by reproduction. Some of the statements to which he refers, for the purpose of refuting them, are as follows: "In a paper read by Mr. Clibborne before the British Association for the Advancement of Science, at Cheltenham, in 1856, entitled 'The tendency of the European races to become extinct in the United States,' he distinctly puts forth the idea that the climate of the United States was unfavorable to the Caucasian constitution. Knox repeats this opinion in his English lectures on the races of men. The existence and rapid increase of the large population in the United States, are held not to conflict with this theory, for these facts are explained by the supposition that our people are composed mostly of strangers from abroad and their children, whose families are extraordinarily fertile in the first generation in America, although they soon become sterile, and, in course of a century or less, yield their places to new arrivals, as their predecessors had done for ages before them, and as their successors will do forever after them. Mr. Louis Schade, in his work published at Washington in 1856, affirms this principle of American deterioration of human life, and says that the power of natural increase of those who were here eighty-two years ago, is reduced to the annual rate of 1.38 per cent, while all the rest of the growth of population within that period is due to new immigrants and their fruitful families. Mr. Frederic Kapp, in an address read before the American Social Science Association, and printed in their journal for 1870, warmly supports this doc-

trine, and says that 'it is the great merit of Mr. Schade to have first applied the true principle of computing the gain of population.' M. A. Carlier, a French traveler in this country, in a paper read before the Société d' Anthropologie of Paris, and printed in their Transactions, endeavors to sustain the same doctrine of the decadence of population in America, and quotes Mr. Schade in proof of his opinion. The Bishop of Cassel said in the House of Lords of Great Britain, 'There are seven millions of natives of Ireland in the United States.' A speaker in a public meeting of Germans in New York said, 'We have four millions of our countrymen here.' Disraeli, in 'Lothair,' makes Monsignore Berwick, who is represented as a man of rare intelligence, say, 'We have twelve million Catholics in the United States.'"

The question thus appears to be one of national importance. It seems but to utter a truism to say that the prosperity of a country must depend upon its capacities for conferring happiness upon its inhabitants. In times past, at least, it has been, and doubtless at present it is, considered one of the most mournful conditions, when the individual can look forward to no one to bear up the family name, and to no representation in the great future. If one must surely die, it is gratifying to believe that this is only partly true, and that we may still live on into the far distant future in our own flesh and blood reproduced in our offspring. The statistics of the United States, collected and published at the time Dr. Jarvis wrote, did not furnish him with sufficient data concerning this point to demonstrate the whole truth; but he seems to have succeeded in showing that the discouraging conclusions of those who have made the statements referred to above, were not warranted by the facts so far as known; and, for his efforts in endeavoring to arrive at the truth of the matter, Dr. Jarvis deserves the thanks of the American people. He dealt with statistics of the United States as a whole, and the statements which he had to controvert were in most cases based upon some wrong interpretation

of statistics published in the United States censuses; such as the case of Mr. Schade, who mistook a statement of the number of children under one year of age living on the day of the census enumeration, for the whole number of children born during the year,—thus omitting all who had been born during the year and had died before the enumeration.

In our own State, an able observer,—Dr. H. O. Hitchcock of Kalamazoo, late President of the State Medical Society,—has himself collected some important statistics of the inhabitants of Kalamazoo, bearing upon the question of the relative number of children born of native and foreign parents, which seem to be more conclusive on this point than any as yet collected by the State, and which, so far as the locality observed is concerned, seem to demonstrate two propositions, which he states as follows:

"1st. The number of non-fertile American families is disproportionately large."

"2d. American families have fewer children than others.

* * * * * * * *

And yet it will be seen that it is fashionable among Americans to have one, two, or even three children." He shows that of the families having one child there were more than an average proportion of natives; of those having two children a still larger proportion; of those having three children the proportion was less than of those having two, "but larger than of those having one; but above this number of children the American per cent falls rapidly below their proper per cent," until of the families having eight children the proportion of Americans was extremely small, while of some of the foreign nationalities the proportion was doubled and even increased to three times their proportion of the whole number of families.

Now, although it be true that American families have fewer children than our foreign-born inhabitants, it does not follow that they contribute less towards maintaining the population. It remains to be ascertained whether the death-rate among

children of foreign-born parents is the same as among the children of natives. This important factor in the problem must be taken into the account before deciding the question. In the absence of knowledge on this point, it will not do to assume, as many have done, that the death-rate of children of native and foreign-born parents is the same. Whether this is true or not in this State, is not yet positively known,—the evidence on this question will be given with the other statistics of deaths,—but it is not safe to make any such assumptions, as will be seen when we reflect that before such statistics as those collected by Dr. Hitchcock, or as these before us, had been obtained, the same kind of reasoning would have led us to assume that the birth-rate among native and foreign-born parents was the same, while now we are entirely satisfied that it may not be and probably is not so.

It seems quite important, therefore, that the "parent-nativity of all who die" be collected in connection with the other vital statistics of this State. This item was collected at the last United States census, but the result has not yet been worked out. When obtained it will only be the result of one effort, and the first one, to obtain this knowledge. To render the answer of the greatest value, the question must be repeated until the evidence is conclusive that the true statement has been reached. If collected every year with the other statistics, this object would soon be attained.

While waiting for such complete and perfect statistics as will entirely settle the question whether the conditions of our State are favorable or unfavorable to the continuance of the Caucasian race, it certainly seems well, in the meantime, to make such use of what we have as will tend to throw light on the subject; but it must be continually kept in mind, that the evidence to be derived from the statistics of births alone, is not sufficient to enable one to form conclusions respecting the relative increase or value of the increase of population by native and foreign-born parents. Multiplication is not necessarily replenishment.

Quantity, in this case, is not so important as quality. It is entirely possible, that the class of inhabitants furnishing the greatest number of children, may be the one causing the greatest burden upon the State, as a whole, by producing a number at dependent ages in excess of their ability to maintain. It has been estimated in a late report of the Massachusetts Board of State Charities, that "it costs the community, upon an average, at least $500 to rear each one of its members from birth to the time when he earns more than he consumes."

But enough has been said to show that there are other points to be considered, that, besides the birth-rate, the death-rate is essential; and, in order to arrive at a true estimate of the relative cost and value of increase of population by reproduction of various races, it is necessary to know the death-rate of each nationality by ages, to have an estimate, in general terms, of the cost of producing a useful member of society, and the average length of useful life, and, indeed, the costs and values of individuals at the different ages. There are, also, questions still more complex, but which are nevertheless susceptible of approximate answers, such as the degree of pauperism, and even crime, caused by excess of offspring at dependent ages, as well as the increased propagation of infectious and contagious diseases among the improvident classes, who are, at the same time, the most fruitful.

TABLE VII.

Parent-Nativity of Children born in Michigan during the Year 1870; Population Represented by Returns of Births for 1870; and Per Cent of Parents of Children born to Population of same Sex and Nativity.

NATIVITY OF PARENTS.	BIRTHS 1870.								POPULATION.[a]			PARENTS.					
	NUMBER.				PER CENT OF TOTAL.							NUMBER.			Per cent of Parents to Pop. of same Sex and Nativity.		
	Total.	Male.	Female.	Unknown.	Total.	Male.	Female.	Unknown.	Total.	Male.	Female.	Total.	Fathers.	Mothers.	Total.	Fathers.	Mothers.
All Nativities	26,668	13,846	12,726	91	100.00	100.00	100.00	100.00	1,158,166	603,655	554,511	49,140	24,570	24,570	4.24	4.07	4.61
Native	12,395	6,468	5,904	28	46.48	46.67	46.39	30.76	904,740	463,422	441,318	28,361	13,720	14,641	3.13	2.96	3.31
Foreign	8,604	4,488	4,101	20	32.26	32.37	32.22	21.97	253,426	140,233	113,193	20,779	10,850	9,929	[b] 8.19	7.73	8.77
Foreign Father	2,246	1,144	1,098	4	8.42	8.26	8.62	4.39	.....	.....	.....	.....	.....	.....	.....	.....	.....
Foreign Mother	1,325	699	625	1	4.96	5.04	4.91	1.09	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nativity Unknown	2,093	1,057	998	38	7.84	7.63	7.84	41.75	.....	.....	.....	.....	.....	.....	.....	.....	.....
One or Both Native	15,966	8,306	7,627	33	59.88	59.98	59.93	36.26	.....	.....	.....	.....	.....	.....	.....	.....	.....
One or Both Foreign	12,175	6,326	5,824	25	45.65	45.68	45.76	27.47	.....	.....	.....	.....	.....	.....	.....	.....	.....

[a] Of counties and townships from which returns of births were received. [b] See remarks following.

EXHIBIT A.

Parent-Nativity of Children Born in Michigan during the Year 1869.

NATIVITY OF PARENTS.	BIRTHS, 1869.	
	Number.	Per cent of Total.
All Nativities	27,098	100.00
Natives	13,060	48.20
Foreign	8,043	29.68
Foreign Father	1,904	7.02
Foreign Mother	1,219	4.49
Unknown	2,867	10.58
One or both Parents Native	16,188	59.73
One or Both Parents Foreign	11,166	41.21

EXHIBIT B.

Parent-Nativity of all Native-born Inhabitants of Michigan June 1, 1870.

NATIVITY OF PARENTS.	NATIVE-BORN POPULATION JUNE 1, 1870.[a]	
	Number.	Per cent of Total.
All Nativities	916,049	100.00
Native	427,890	46.71
Foreign	416,336	45.44
Foreign Father	43,201	4.71
Foreign Mother	28,622	3.12
One or Both Parents Native	499,713	54.55
One or Both Parents Foreign	488,159	53.28

[a] From Table IV., Pop. Vol. U. S. Census of 1870.

EXHIBIT C.

Parent-Nativity of Total Population of Michigan June 1, 1870.

NATIVITY OF PARENTS.	POPULAT'N JUNE 1, 1870.[a]	
	Number.	Per cent of Total.
All Nativities	1,184,059	100.00
Both Parents Native	427,890	36.13
Both Parents Foreign[b]	684,346	57.79
Fathers Foreign	43,201	3.64
Mothers Foreign	28,622	2.41
One or Both Parents Native	499,713	42 20
One or Both Parents Foreign	756,169	63.86

[a] From Table IV., Pop. Vol. U. S. Census of 1870.
[b] Includes foreign-born inhabitants.

The statements in Table VII. not only cannot be taken as positive evidence of greater useful addition to the population by reproduction among the foreign-born citizens, but some of the apparent teaching of the last part of the table must not be accepted without explanation. By the table it appears that the per cent of all parents to total population was 4.24; the per cent of native-born parents to native population only 3.13; while the per cent of foreign-born parents to foreign-born population was 8.19. It should be remembered in this connection that the foreign population includes, with slight exceptions, only those of an age capable of reproduction, while the American or native population is made to include all the children of both native and foreign-born parents, making the native population appear very large and the per cent of native parents to total native population very small. By Exhibit B, it will be seen that about one-half of the American-born inhabitants of Michigan are the children of foreign-born parents. Exhibit C shows that nearly 58 per cent of the total number of inhabitants of the State were born of foreign parents, and nearly 64 per cent

had one or both parents foreign. Exhibits A, B, and C follow Table VII. in order to allow of ready comparison of the parent-nativity of children born in 1870, with that of children born in 1869, with the native-born inhabitants of the State, and with the total population, including the foreign born. By comparing Table VII. with Exhibit A it will be seen that the proportion of children born of native parents was less in 1870 than in 1869. In the report for 1869 it is remarked that "it appears that the percentage of children born of American parents, compared with the whole number of births in the State, is gradually decreasing." Exhibit B shows that the parent-nativity of the American-born inhabitants of the State is almost precisely the same as of the children born in 1870, if we suppose the children of unknown nativity to have been of foreign or mixed parentage. If we compute the proportion of parents of children born in 1870 to the total population of the State of Michigan (stated in Table IV., United States Census of 1870), we find for total number of parents of all children born it is 4.15 per cent; for parents both foreign to inhabitants having both parents foreign (includes foreign-born and their children), it is 2.51 per cent; while for parents both native to inhabitants having both parents native the proportion is 5.79 per cent. By comparing these percentages with those shown in Table VII. it will be seen that very different conclusions may be reached by different methods of combination of statistics. When wrong impressions are so widespread, and so confidently asserted as they appear to be in this matter, it seems important to show how uncertain is their foundation in fact, even though it may not be possible to show what is the exact truth. In order to learn accurately the relative fecundity of the native and foreign-born inhabitants it is essential to know the number of each sex of both native and foreign-born, at the reproductive ages, in order to compute the proportion of births of each class to the number capable of producing them. For the reason that this knowledge concerning this State, which was collected for the United States Census of 1870, is not yet worked out and published, the more exact determination of the question must be postponed to a future occasion.

TABLE VIII.

Showing by Counties, and by Sex, the Nativity of Parents of Children born in Michigan during the Year 1870; the Number of Males born to One Hundred Females; and the Per Cent of Each Sex born to Total Number of Both Sexes (Still-births included).

STATE AND COUNTIES.	No. of Males to 100 Females.	SEX.	Per cent of Each Sex to total of Both Sexes.	No. of Children born.	NATIVITY OF PARENTS.				
					Native.	Foreign.	Foreign Father.	Foreign Mother.	Unknown.
State	[a] 108	Totals	.....	26,668	12,895	8,604	2,246	1,325	2,098
		Males	52.10	13,846	6,468	4,488	1,144	699	1,057
		Females	47.89	12,726	5,904	4,101	1,098	625	998
		Unknown	.....	91	28	20	4	1	38
Alcona	68	Totals	100.00	27	5	15	1	6	.....
		Males	40.74	11	1	6	1	3	.....
		Females	59.25	16	4	9	.....	3	.....
Allegan	104	Totals	100.00	644	330	212	55	26	21
		Males	51.08	329	169	115	28	10	7
		Females	48.91	315	161	97	27	16	14
Alpena [b]		Totals	100.00	3	.....	3	.....	.....	.....
		Males	100.00	3	.....	3	.....	.....	.....
		Females	.....	.....	.....	.....	.....	.....	.....
Antrim	126	Totals	100.00	59	28	16	11	2	2
		Males	55.93	33	15	11	6	1	.....
		Females	44.06	26	13	5	5	1	2
Barry	122	Totals	.....	466	341	60	36	19	10
		Males	55.05	256	191	34	16	9	6
		Females	44.94	209	149	26	20	10	4
		Unknown	.....	1	1	.....	.....	.....	.....

[a] The fraction is omitted in each case in columns for No. of Males to 100 Females, and Per cent of each Sex. The plus sign may be understood to follow each statement.
[b] Evidently not all returned.

TABLE VIII.—CONTINUED.

COUNTIES.	No. of Males to 100 Females.	SEX.	Per cent of Each Sex to total of Both Sexes.	No. of Children born.	NATIVITY OF PARENTS. Native.	Foreign.	Foreign Father.	Foreign Mother.	Unknown.
Bay	[a] 115	Totals	------	480	113	263	50	23	26
		Males	53.55	256	68	132	24	17	15
		Females	46.44	222	45	129	26	11	11
		Unknown	------	2	------	2	------	------	------
Benzie	114	Totals	------	62	33	14	3	6	6
		Males	53.33	32	13	10	------	5	4
		Females	46.66	28	20	4	2	1	1
		Unknown	------	2	------	------	1	------	1
Berrien	98	Totals	------	661	404	150	56	20	31
		Males	49.69	328	205	69	36	10	8
		Females	50.30	332	198	81	20	10	23
		Unknown	------	1	1	------	------	------	------
Branch	98	Totals	100.00	499	393	33	38	20	15
		Males	49.49	247	184	18	23	12	10
		Females	50.50	252	209	15	15	8	5
Calhoun	103	Totals	------	746	476	87	48	31	104
		Males	50.87	377	253	42	26	14	42
		Females	49.12	364	222	45	22	17	58
		Unknown	------	5	1	------	------	------	4
Cass	127	Totals	------	437	365	28	21	13	10
		Males	56.09	244	208	13	10	8	5
		Females	43.90	191	155	15	11	5	5
		Unknown	------	2	2	------	------	------	------
Charlevoix	100	Totals	100.00	34	13	12	3	6	------
		Males	50.00	17	7	7	1	2	------
		Females	50.00	17	6	5	2	4	------
Cheboygan	61	Totals	100.00	34	------	1	1	1	31
		Males	38.23	13	------	------	1	1	11
		Females	61.76	21	------	1	------	------	20

[a] The fraction is omitted in each case in columns for No. of Males to 100 Females, and Per cent of each Sex. The plus sign may be understood to follow each statement.

TABLE VIII.—CONTINUED.

COUNTIES.	No. of Males to 100 Females.	SEX.	Per cent of Each Sex to total of Both Sexes.	No. of Children born.	NATIVITY OF PARENTS. Native.	Foreign.	Foreign Father.	Foreign Mother.	Unknown.
Chippewa	62	Totals	100.00	57	13	8	7	.....	29
		Males	38.59	22	4	6	2	.....	10
		Females	61.40	35	9	2	5	.....	19
Clinton	99	Totals	.....	564	358	114	55	26	11
		Males	49.91	281	174	64	28	10	5
		Females	50.08	282	184	50	26	16	6
		Unknown	.....	1	.....	.....	1	.....	.....
Delta	107	Totals	100.00	79	16	51	5	3	4
		Males	51.89	41	9	26	2	1	3
		Females	48.10	38	7	25	3	2	1
Eaton	96	Totals	100.00	588	455	29	44	14	46
		Males	48.97	288	221	16	21	4	26
		Females	51.02	300	234	13	23	10	20
Emmet	170	Totals	100.00	46	39	.....	2	3	2
		Males	63.04	29	23	.....	2	2	2
		Females	36.95	17	16	.....	.....	1	.....
Genesee	109	Totals	100.00	657	426	113	61	45	12
		Males	52.20	343	213	62	33	28	7
		Females	47.79	314	213	51	28	17	5
Grand Traverse	141	Totals	100.00	104	30	22	5	5	42
		Males	58.65	61	23	11	3	4	20
		Females	41.34	43	7	11	2	1	22
Gratiot	100	Totals	100.00	300	236	20	26	6	12
		Males	50.00	150	114	10	17	4	5
		Females	50.00	150	122	10	9	2	7
Hillsdale	100	Totals	100.00	604	488	43	30	25	18
		Males	50.16	303	252	16	13	16	6
		Females	49.83	301	236	27	17	9	12

[a] The fraction is omitted in each case in columns for No. of Males to 100 Females, and Per cent of each Sex. The plus sign may be understood to follow each statement.

TABLE VIII.—CONTINUED.

COUNTIES.	No. of Males to 100 Females.	SEX.	Per cent of Each Sex to total of Both Sexes.	No. of Children born.	NATIVITY OF PARENTS. Native.	Foreign.	Foreign Father.	Foreign Mother.	Unknown.
Huron	[a] 106	Totals	[a] 100.00	301	87	231	21	10	2
		Males	51.49	155	21	114	13	6	1
		Females	48.50	146	16	117	8	4	1
Ingham	112	Totals	------	488	344	48	27	20	49
		Males	52.88	257	190	26	9	6	26
		Females	47.11	229	152	22	18	14	23
		Unknown	------	2	2	------	------	------	------
Ionia	116	Totals	------	587	410	86	47	30	14
		Males	53.73	309	205	51	28	17	8
		Females	46.26	266	196	33	19	13	5
		Unknown	------	12	9	2	------	------	1
Iosco	86	Totals	100.00	93	80	39	10	8	6
		Males	46.23	43	13	18	5	4	3
		Females	53.76	50	17	21	5	4	3
Isabella	109	Totals	100.00	109	79	15	4	6	5
		Males	52.29	57	42	9	------	4	2
		Females	47.70	52	37	6	4	2	3
Jackson	98	Totals	------	614	418	104	46	32	14
		Males	49.50	303	210	51	14	16	12
		Females	50.49	309	207	52	32	16	2
		Unknown	------	2	1	1	------	------	------
Kalamazoo	119	Totals	------	658	401	140	49	24	44
		Males	54.49	358	226	74	28	12	18
		Females	45.50	299	174	66	21	12	26
		Unknown	------	1	1	------	------	------	------
Kalkaska	66	Totals	100.00	15	5	3	3	1	3
		Males	40.00	6	3	2	1	------	------
		Females	60.00	9	2	1	2	1	3

[a] The fraction is omitted in each case in columns for No. of Males to 100 Females, and Per cent of each Sex. The plus sign may be understood to follow each statement.

TABLE VIII.—CONTINUED.

COUNTIES.	Number of Males to 100 Females.	SEX.	Per cent of Each Sex to total of Both Sexes.	No. of Children born.	NATIVITY OF PARENTS. Native.	Foreign.	Foreign Father.	Foreign Mother.	Unknown.
Kent	a 97	Totals	.....	1,089	340	204	86	56	403
		Males	49.25	528	164	101	40	29	194
		Females	50.74	544	175	103	45	26	195
		Unknown	.....	17	1	.....	1	1	14
Lake	200	Totals	100.00	6	.....	1	.....	1	4
		Males	66.66	4	.....	.....	.....	1	3
		Females	33.33	2	.....	1	.....	.....	1
Lapeer	104	Totals	.....	447	164	125	71	42	45
		Males	51.12	228	83	63	38	23	21
		Females	48.87	218	80	62	33	19	24
		Unknown	.....	1	1	.....	.....	.....	.....
Leelanaw	78	Totals	100.00	134	40	74	10	10	.....
		Males	44.02	59	24	30	1	4	.....
		Females	55.97	75	16	44	9	6	.....
Lenawee	111	Totals	.....	880	525	136	72	36	61
		Males	52.71	437	264	79	33	22	39
		Females	47.28	392	261	57	38	14	22
		Unknown	.....	1	.....	.....	1	.....	.....
Livingston	117	Totals	.....	478	296	66	43	16	57
		Males	54.00	256	158	31	31	8	28
		Females	45.99	218	138	35	12	8	25
		Unknown	.....	4	.....	.....	.....	.....	4
Macomb	106	Totals	.....	607	238	245	68	33	23
		Males	51.65	313	121	127	36	14	15
		Females	48.34	293	117	117	32	19	8
		Unknown	.....	1	.....	1	.....	.....	.....
Manistee	102	Totals	.....	215	54	107	22	12	20
		Males	50.69	109	26	55	13	6	9
		Females	49.30	106	28	52	9	6	11

[a] The fraction is omitted in each case in columns for No. of Males to 100 Females, and Per cent of each Sex. The plus sign may be understood to follow each statement.

TABLE VIII.—CONTINUED.

COUNTIES.	No. of Males to 100 Females.	SEX.	Per cent of Each Sex to total of Both Sexes.	No. of Children born.	NATIVITY OF PARENTS.				
					Native.	Foreign	Foreign Father.	Foreign Mother.	Unknown.
Marquette	[a] 110	Totals	------	675	54	585	21	8	7
		Males	52.45	353	29	305	11	5	3
		Females	47.54	320	25	280	10	3	2
		Unknown	------	2	------	------	------	------	2
Mason	108	Totals	------	76	43	17	10	4	2
		Males	52.00	39	24	7	5	2	1
		Females	48.00	36	19	9	5	2	1
		Unknown	------	1	------	1	------	------	------
Mecosta	116	Totals	100.00	199	107	51	22	15	4
		Males	53.76	107	57	29	11	8	2
		Females	46.23	92	50	22	11	7	2
Menominee	100	Totals	------	13	3	6	2	1	1
		Males	50.00	6	1	4	------	------	1
		Females	50.00	6	2	1	2	1	------
		Unknown	------	1	------	1	------	------	------
Midland	132	Totals	100.00	123	76	30	8	8	1
		Males	56.91	70	43	16	6	4	1
		Females	43.08	53	33	14	2	4	------
Missaukee	------	Totals	100.00	2	------	2	------	------	------
		Males	------	------	------	------	------	------	------
		Females	100.00	2	------	2	------	------	------
Monroe	116	Totals	------	621	304	149	54	23	91
		Males	53.87	334	156	88	33	10	47
		Females	46.12	286	147	61	21	13	44
		Unknown	------	1	1	------	------	------	------
Montcalm	97	Totals	------	323	214	45	30	18	16
		Males	49.37	158	102	25	11	10	10
		Females	50.62	162	111	20	19	8	4
		Unknown	------	3	1	------	------	------	2

[a] The fraction is omitted in each case in columns for No. of Males to 100 Females, and Per Cent of each Sex. The plus sign may be understood to follow each statement.

TABLE VIII.—CONTINUED.

COUNTIES.	No. of Males to 100 Females.	SEX.	Per cent of each Sex to total of both Sexes.	No. of Children born.	NATIVITY OF PARENTS. Native.	Foreign.	Foreign Father.	Foreign Mother.	Unknown.
Muskegon	118	Totals	[a] 100.00	349	92	129	34	21	73
		Males	54.15	189	48	65	18	14	44
		Females	45.84	160	44	64	16	7	29
Newaygo	78	Totals	100.00	132	67	14	7	6	38
		Males	43.93	58	29	8	4	1	16
		Females	56.06	74	38	6	3	5	22
Oakland	118	Totals	100.00	568	257	66	55	35	150
		Males	54.17	305	137	37	25	17	89
		Females	45.82	258	120	29	30	18	61
Oceana	142	Totals	100.00	177	76	40	20	11	30
		Males	58.75	104	48	25	5	8	18
		Females	41.24	73	28	15	15	3	12
Ontonagon	117	Totals	100.00	111	6	91	9	5	.....
		Males	54.05	60	2	52	5	1	.....
		Females	45.94	51	4	39	4	4	.....
Osceola	97	Totals	100.00	75	40	25	8	1	1
		Males	49.33	37	15	16	4	1	1
		Females	50.66	38	25	9	4	.....	.....
Ottawa	123	Totals	.....	727	239	335	55	39	59
		Males	55.33	399	127	180	32	25	35
		Females	44.66	322	112	153	23	14	20
		Unknown	.....	6	.....	2	.....	.....	4
Saginaw	108	Totals	100.00	970	223	480	88	57	122
		Males	51.95	504	119	252	50	22	61
		Females	48.04	466	104	228	38	35	61
Sanilac	118	Totals	.....	439	44	297	45	37	16
		Males	53.08	232	29	156	21	16	10
		Females	46.91	205	15	139	24	21	6
		Unknown	.....	2	.....	2	.....	.....	.....

[a] The fraction is omitted in each case in columns for No. of Males to 100 Females, and Per cent of each Sex. The plus sign may be understood to follow each statement.

TABLE VIII.—CONTINUED.

COUNTIES.	No. of Males to 100 Females.	SEX.	Per cent of each Sex to total of both Sexes.	No. of Children born.	NATIVITY OF PARENTS.				
					Native.	Foreign.	Foreign Father.	Foreign Mother.	Unknown.
Schoolcraft	142	Totals	100.00	17	2	11	------	2	2
		Males	58.82	10	------	7	------	2	1
		Females	41.17	7	2	4	------	------	1
Shiawassee	109	Totals	------	401	256	68	29	14	34
		Males	52.26	208	132	35	14	8	19
		Females	47.73	190	121	33	15	6	15
		Unknown	------	3	3	------	------	------	------
St. Clair	106	Totals	------	1,086	205	606	106	102	17
		Males	51.49	588	97	319	58	55	9
		Females	48.50	502	108	286	53	47	8
		Unknown	------	1	------	1	------	------	------
St. Joseph	110	Totals	100.00	501	377	82	25	14	3
		Males	52.49	263	199	43	13	8	------
		Females	47.50	238	178	39	12	6	3
Tuscola	141	Totals	------	291	143	86	32	27	3
		Males	58.62	170	77	52	21	19	1
		Females	41.37	120	66	33	11	8	2
		Unknown	------	1	------	1	------	------	------
Van Buren	113	Totals	------	606	436	45	51	27	47
		Males	53.22	322	242	24	20	12	24
		Females	46.77	283	193	21	31	15	23
		Unknown	------	1	1	------	------	------	------
Washtenaw	108	Totals	100.00	721	348	249	75	37	12
		Males	52.14	376	190	124	38	20	4
		Females	47.85	345	158	125	37	17	8
Wayne	109	Totals	------	3,670	821	2,174	323	170	123
		Males	52.24	1,910	452	1,110	161	98	89
		Females	47.75	1,746	367	1,058	162	72	87
		Unknown	------	14	2	6	------	------	6
Wexford	130	Totals	100.00	23	19	3	------	1	------
		Males	50.52	13	11	2	------	------	------
		Females	49.47	10	8	1	------	1	------

* See note on previous page.

TABLE IX.

Exhibiting, by Sex, the Number of Pairs of Twins, and Twin Children, born in Michigan during the Year 1870, by Months, arranged in order by Number; and Number of Males to 100 Females, by Pairs and by Individuals.

YEAR AND MONTH.		No. Twin Children.					Number of Pairs of Twins.						
		Total.	Male.	Female.	Unknown.	Males to 100 Females.	Total.	Male.	Female.	One of each Sex.	Unknown.	Males to 100, one of each Sex.	Males to 100 Females.
Year 1870		678	345	322	11	107	339	118½	107	108	5½	109	110
More than an Average Number of Twins.	July	78	34	41	3	83	39	12	15½	10	1½	120	77
	October	74	47	27	----	174	37	19	9	9	----	211	211
	September	68	32	36	----	89	34	9	11	14	----	64	81
	August	66	36	28	2	128	33	12	8	12	1	100	150
	November	60	22	38	----	58	30	6	14	10	----	60	42
	May	60	30	27	3	111	30	9½	8	11	1½	86	111
Less than an Average Number of Twins.	June	56	37	19	----	194	28	14	5	9	----	155	280
	April	46	18	27	1	66	23	6	10½	6	½	100	57
	December	44	21	23	----	91	22	7	8	7	----	100	87
	March	42	21	19	2	110	21	6	5	9	1	66	120
	February	42	27	15	----	180	21	11	5	5	----	220	220
	January	40	20	20	----	100	20	7	7	6	----	116	100
	Unknown	2	----	2	----	----	1	------	1	----	----	----	----
Average per month		56.5	28.7	26.8	----	107	28.2	9.87	8.91	9	----	109	110

Of the 339 pairs of twins born during the year 1870, the order of greatest number of pairs by sex was first, both males, 118½ pairs; second, one male and one female, 108 pairs; third, both females, 107 pairs; unknown, 5½ pairs.

Of the 678 twin children born, 345 were males, 322 were females, and of 11 the sex was not returned.

The order of greatest number by months, shown by Table IX., was not precisely the same as for the whole number of children born. The greatest number of total births in any two months occurred in August and September, while the greatest number of twins were born in July and October, the months immediately before and after those in which the total birth-rate was highest.

TABLE X.

Parent-Nativity of Twins Born in Michigan during the Year ending December 31st, 1870.

NATIVITY OF PARENTS.	TWIN BIRTHS. Number of Pairs. Total.	Male.	Female.	One of each Sex.	Unknown.	Per Cent of Total. Total.	Male.	Female.	One of each Sex.	Unknown.	POPULATION REPRESENTED BY BIRTHS. Total.	Male.	Female.	PARENTS. (Of Unknown Nativity excluded.) Number. Total.	Fathers.	Mothers.	Per Cent of Population. Total.	Fathers.	Mothers.
All Nativities.....	339	118½	107	108	5½	100.00	100.00	100.00	100.00	100.00	1,158,166	608,655	554,511	620	310	310	.058	.051	.055
Native.....	169	68	56½	49	½	49.85	58.16	52.80	45.37	9.09	904,740	463,422	441,318	377	188	194	.041	.039	.043
Foreign.....	102	31½	31½	37	2	30.08	26.58	29.43	34.25	36.36	253,426	140,233	113,193	243	127	116	[a] .095	.090	.102
Foreign Father.....	25	10	11	4	....	7.37	8.43	10.28	3.70	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Foreign Mother.....	14	7	2	5	....	4.12	5.90	1.86	4.62	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Unknown.....	29	7	6	13	3	8.55	5.90	5.60	12.03	54.54	.....	.....	.....	.....	.....	.....	.....	.....	.....
One or Both Native.	208	80	69½	58	½	61.35	23.59	64.95	53.70	9.09	.....	.....	.....	.....	.....	.....	.....	.....	.....
One or Both Foreign	141	48½	44½	46	2	41.59	14.30	41.58	42.59	36.36	.....	.....	.....	.....	.....	.....	.....	.....	.....

[a] See comments on Table VII, page 41.

TABLE XI.

Parent-Nativity of Twins Born in Michigan during the year ending December 31st, 1870. Showing by Sex the Number of Pairs, and Per cent of Total Number of Pairs, of Twins Born of Parents who were Natives of the Same and of Different States or Countries.

NATIVITY OF PARENTS.	PAIRS OF TWINS.									
	NUMBER.					PER CENT OF TOTAL.				
	Total.	Males.	Females.	One of Each Sex.	Unknown.	Total.	Males.	Females.	One of Each Sex.	Unknown.
All Nativities	339	118½	107	108	5½	100.00	100.00	100.00	100.00	100.00
Same American or Foreign State	183	57½	57½	66	2	53.98	48.52	53.73	61.11	36.36
Different American or Foreign State	78	31	28½	18	½	23.00	26.16	26.63	16.66	9.09
Foreign Father and American Mother	25	10	11	4	.....	7.37	8.43	10.28	3.70	.....
Foreign Mother and American Father	14	7	2	5	.....	4.12	5.90	1.86	4.62	.....
Unknown	39	13	8	15	3	11.50	10.97	7.47	13.88	54.54
Different State or Country [a]	117	48	41½	27	½	34.51	40.50	38.78	25.00	9.09

[a] Includes all except "Same American or Foreign State" and "Unknown." Compare with "Same American or Foreign State."

TABLE XII.

Exhibiting for the State and Counties, by Sex, the Number of Pairs of Twins, the Number of Twin Children, and the Nativity of Parents of Twins, born in Michigan during the Year ending December 31st, 1870. Nativity stated by Pairs of Twins.

State and Counties.	Sex.	Number of Individuals.	Number of Twins by Pairs.	Nativity of Parents.								
				Native.			Foreign.			Foreign Father and Native Mother.	Foreign Mother and Native Father.	Unknown Parentage.
				Both Parents from same State.	From Different State.	Unknown State.	Both from same Country.	From Different Countries.	Unknown State.			
State	Total	678	339	97	64	8	86	14	2	25	14	29
	Male	345	118½	[a] 33	[b] 26	4	24½	[a] 5	2	10	7	7
	Female	322	107	[a] 33	[a] 21½	2	24½	7	--	[c] 11	2	[d] 6
	One of each	----	108	31	16	2	35	2	--	4	5	13
	Unknown	11	5½	------	½	--	2	-----	--	----	----	3
Allegan	Total	14	7	------	3	--	4	-----	--	----	----	----
	Male	7	1	------	------	--	1	-----	--	----	----	----
	Female	7	1	------	1	--	------	-----	--	----	----	----
	One of each	----	5	------	2	--	3	-----	--	----	----	----
Antrim	Total	2	1	------	------	--	1	-----	--	----	----	----
	Male	2	1	------	------	--	1	-----	--	----	----	----
Barry	Total	22	11	3	3	--	2	-----	--	2	1	----
	Male	17	7	------	[c] 3	--	2	-----	--	1	1	----
	Female	5	1	------	------	--	------	-----	--	1	----	----
	One of each	----	3	3	------	--	------	-----	--	----	----	----

[a] 1 Color unknown.
[b] 1 Colored and 1 color unknown.
[c] 1 White and Indian.
[d] Indian.
[e] Colored.

TABLE XII.—CONTINUED.

Counties.	Sex.	Number of Individuals.	No. of Twins by Pairs.	Nativity of Parents.								
				Native.			Foreign.			Foreign Father and Native Mother.	Foreign Mother and Native Father.	Unknown Parentage.
				Both Parents from same State.	From different State.	Unknown State.	Both from same Country.	From different Countries.	Unknown State.			
Bay	Total	12	6	.....	.....	..	3	1	..	1	1	....
	Male	6	2	.....	.....	..	.....	1	..	....	1	....
	Female	6	2	.....	.....	..	1	.....	..	1	....	....
	One of each	....	2	.....	.....	..	2	.....	..	....	....	....
Berrien	Total	16	8	4	.....	1	1	.....	..	1	....	1
	Male	11	3	.....	.....	1	1	.....	..	1	....	....
	Female	5	.....	.....	.....	..	.....	.....	..	....	....	....
	One of each	....	5	4	.....	..	.....	.....	..	....	....	1
Branch	Total	12	6	2	2	..	.....	.....	..	2	....	....
	Male	4	2	1	1	..	.....	.....	..	....	....	....
	Female	8	4	1	1	..	.....	.....	..	2	....	....
Calhoun	Total	10	5	3	1	..	1	.....	..	....	....	....
	Male	4	2	2	.....	..	.....	.....	..	....	....	....
	Female	6	3	1	1	..	1	.....	..	....	....	....
Cass	Total	6	3	1	2	..	.....	.....	..	....	....	....
	Male	2	1	.....	1	..	.....	.....	..	....	....	....
	Female	4	2	1	1	..	.....	.....	..	....	....	....
Chippewa	Total	4	2	.....	.....	..	.....	.....	..	1	....	1
	Male	1	.....	.....	.....	..	.....	.....	..	....	....	....
	Female	3	1	.....	.....	..	.....	.....	..	[f] 1	....	....
	One of each	....	1	.....	.....	..	.....	.....	..	....	....	1
Clinton	Total	14	7	3	1	..	3	.....	..	....	....	....
	Male	3	.....	.....	.....	..	.....	.....	..	....	....	....
	Female	11	4	1	.....	..	3	.....	..	....	....	....
	One of each	....	3	2	1	..	.....	.....	..	....	....	....

[f] White and Indian.

TABLE XII.—CONTINUED.

Counties.	Sex.	Number of Individuals.	No. of Twins by Pairs.	Nativity of Parents. Native. Both Parents from same State.	Native. From different State.	Native. Unknown State.	Foreign. Both from same Country.	Foreign. From different Countries.	Foreign. Unknown State.	Foreign Father and Native Mother.	Foreign Mother and Native Father.	Unknown Parentage.
Eaton	Total	16	8	3	2	..	1	.....	1	....	1	....
	Male	9	4	.....	1	..	1	.....	1	....	1	....
	Female	7	3	2	1	..	.....	.....	..	....	....	....
	One of each	....	1	1	.....	..	.....	.....	..	....	....	....
Genesee	Total	16	8	3	2	..	1	.....	..	1	1	....
	Male	12	5	2	1	..	1	.....	..	1	....	....
	Female	4	1	.....	.....	..	.....	.....	..	....	1	....
	One of each	....	2	1	1	..	.....	.....	..	....	....	....
Gratiot	Total	12	6	2	2	..	1	.....	..	....	....	1
	Male	5	2	1	1	..	.....	.....	..	....	....	....
	Female	7	3	1	1	..	1	.....	..	....	....	....
	One of each	....	1	.....	.....	..	.....	.....	..	....	....	1
Hillsdale	Total	22	11	4	4	..	2	.....	..	....	1	....
	Male	16	7	3	3	..	.....	.....	..	....	1	....
	Female	6	2	.....	1	..	1	.....	..	....	....	....
	One of each	....	2	1	.....	..	1	.....	..	....	....	....
Huron	Total	4	2	1	.....	..	1	.....	..	....	....	....
	Male	3	1	1	.....	..	.....	.....	..	....	....	....
	Female	1	.....	.....	.....	..	.....	.....	..	....	....	....
	One of each	....	1	.....	.....	..	1	.....	..	....	....	....
Ingham	Total	16	8	3	3	..	1	.....	..	1	....	....
	Male	5	1	.....	.....	..	1	.....	..	....	....	....
	Female	10	3½	1	2½	..	.....	.....	..	....	....	....
	One of each	....	3	2	.....	..	.....	.....	..	1	....	....
	Unknown	1	½	.....	½	..	.....	.....	..	....	....	....

TABLE XII.—CONTINUED.

Counties.	Sex.	Number of Individuals.	No. of Twins by Pairs.	Nativity of Parents. Native. Both Parents from same State.	Native. From different State.	Native. Unknown State.	Foreign. Both from same Country.	Foreign. From different Countries.	Foreign. Unknown State.	Foreign Father and Native Mother.	Foreign Mother and Native Father.	Unknown Parentage.
Ionia	Total	20	10	4	1	2	1	----	--	1	1	----
	Male	10	3	----	----	1	1	----	--	1	----	----
	Female	10	3	2	----	1	----	----	--	----	----	----
	One of each	----	4	2	1	--	----	----	--	----	1	----
Iosco	Total	2	1	1	----	--	----	----	--	----	----	----
	Male	2	1	1	----	--	----	----	--	----	----	----
Isabella	Total	2	1	1	----	--	----	----	--	----	----	----
	Male	1	----	----	----	--	----	----	--	----	----	----
	Female	1	----	----	----	--	----	----	--	----	----	----
	One of each	----	1	1	----	--	----	----	--	----	----	----
Jackson	Total	16	8	4	2	--	1	----	--	----	----	1
	Male	11	5	2	2	--	----	----	--	----	----	1
	Female	5	2	1	----	--	1	----	--	----	----	----
	One of each	----	1	1	----	--	----	----	--	----	----	----
Kalamazoo	Total	24	12	7	3	--	2	----	--	----	----	----
	Male	13	5	2	1	--	2	----	--	----	----	----
	Female	11	4	3	1	--	----	----	--	----	----	----
	One of each	----	3	2	1	--	----	----	--	----	----	----
Kent	Total	34	17	1	3	--	1	1	--	2	2	7
	Male	18	6	1	2	--	1	----	--	----	----	2
	Female	14	4	----	----	--	----	1	--	2	----	1
	One of each	----	6	----	1	--	----	----	--	----	2	3
	Unknown	2	1	----	----	--	----	----	--	----	----	1
Lapeer	Total	18	9	3	1	--	1	----	--	----	----	4
	Male	8	2	----	1	--	----	----	--	----	----	1
	Female	10	3	1	----	--	----	----	--	----	----	2
	One of each	----	4	2	----	--	1	----	--	----	----	1

TABLE XII.—CONTINUED.

Counties.	Sex.	Number of Individuals.	Number of Twins by Pairs.	Nativity of Parents.								
				Native.			Foreign.			Foreign Father and Native Mother.	Foreign Mother and Native Father.	Unknown Parentage.
				Both Parents from same State.	From different State.	Unknown State.	Both from same Country.	From different Countries.	Unknown State.			
Leelanaw...	Total	4	2	.....	.....	..	.....	2	..	....	....	....
	Male	....	.....	.....	.....	..	.....	.....	..	....	....	....
	Female	4	2	.....	.....	..	.....	2	..	....	....	....
Lenawee....	Total	26	13	2	4	..	.....	.....	1	2	....	4
	Male	14	6	.....	s 2	..	.....	.....	1	....	....	3
	Female	12	5	s 2	1	..	.....	.....	..	2	....	....
	One of each	....	2	.....	1	..	.....	.....	..	....	....	1
Livingston..	Total	6	3	1	1	..	.....	.....	..	1	....	....
	Male	1	.....	.....	.....	..	.....	.....	..	....	....	....
	Female	5	2	1	1	..	.....	.....	..	....	....	....
	One of each	....	1	.....	.....	..	.....	.....	..	1	....	....
Macomb	Total	10	5	.....	4	..	1	.....	..	....	....	....
	Male	5	1	.....	1	..	.....	.....	..	....	....	....
	Female	5	1	.....	1	..	.....	.....	..	....	....	....
	One of each	....	3	.....	2	..	1	.....	..	....	....	....
Manistee....	Total	2	1	.....	.....	..	1	.....	..	....	....	....
	Male	1	.....	.....	.....	..	.....	.....	..	....	....	....
	Female	1	.....	.....	.....	..	.....	.....	..	....	....	....
	One of each	....	1	.....	.....	..	1	.....	..	....	....	....
Marquette...	Total	8	4	1	.....	..	3	.....	..	....	....	....
	Male	3	.....	.....	.....	..	.....	.....	..	....	....	....
	Female	5	1	.....	.....	..	1	.....	..	....	....	....
	One of each	....	3	1	.....	..	2	.....	..	....	....	....
Mason.....	Total	4	2	1	1	..	.....	.....	..	....	....	....
	Male	1	.....	.....	.....	..	.....	.....	..	....	....	....
	Female	3	1	1	.....	..	.....	.....	..	....	....	....
	One of each	....	1	.....	1	..	.....	.....	..	....	....	....

s Color unknown.

TABLE XII.—CONTINUED.

Counties.	Sex.	Number of Individuals.	No. of Twins by Pairs.	Nativity of Parents.								
				Native.			Foreign.			Foreign Father and Native Mother.	Foreign Mother and Native Father.	Unknown Parentage.
				Both Parents from same State.	From different State.	Unknown State.	Both from same Country.	From different Countries.	Unknown State.			
Mecosta	Total	6	3	1	1	--	------	1	--	----	----	----
	Male	4	2	[h]1	------	--	------	[h]1	--	----	----	----
	Female	2	1	------	[h]1	--	------	------	--	----	----	----
Midland	Total	6	3	1	------	--	------	1	--	1	----	----
	Male	4	2	------	------	--	------	1	--	1	----	----
	Female	2	1	1	------	--	------	------	--	----	----	----
Monroe	Total	18	9	6	1	--	1	1	--	----	----	----
	Male	13	5	3	1	--	1	------	--	----	----	----
	Female	5	1	1	------	--	------	------	--	----	----	----
	One of each	----	3	2	------	--	------	1	--	----	----	----
Montcalm	Total	6	3	2	------	--	------	------	--	1	----	----
	Male	5	2	2	------	--	------	------	--	----	----	----
	Female	1	------	------	------	--	------	------	--	----	----	----
	One of each	----	1	------	------	--	------	------	--	1	----	----
Muskegon	Total	6	3	------	1	--	2	------	--	----	----	----
	Male	3	1	------	1	--	------	------	--	----	----	----
	Female	3	1	------	------	--	1	------	--	----	----	----
	One of each	----	1	------	------	--	1	------	--	----	----	----
Oakland	Total	12	6	2	------	--	1	1	--	----	----	2
	Male	8	2	------	------	--	1	1	--	----	----	----
	Female	4	------	------	------	--	------	------	--	----	----	----
	One of each	----	4	2	------	--	------	------	--	----	----	2
Oceana	Total	2	1	------	------	--	------	1	--	----	----	----
	Male	2	1	------	------	--	------	1	--	----	----	----
Osceola	Total	2	1	------	1	--	------	------	--	----	----	----
	Male	----	------	------	------	--	------	------	--	----	----	----
	Female	2	1	------	1	--	------	------	--	----	----	----

[h] Color unknown.

TABLE XII.—CONTINUED.

Counties.	Sex.	Number of Individuals.	Number of Twins by Pairs.	Nativity of Parents. Native. Both Parents from same State.	Native. From different State.	Native. Unknown State.	Foreign. Both from same Country.	Foreign. From different Countries.	Foreign. Unknown State.	Foreign Father and Native Mother.	Foreign Mother and Native Father.	Unknown Parentage.
Ottawa	Total	22	11	8	.....	..	4	1	..	....	1	2
	Male	5	1	.....	.....	..	.....	.....	..	....	1	....
	Female	13	5	2	.....	..	2	1	..	....	....	....
	One of each	....	3	1	.....	..	2	.....	..	....	....	....
	Unknown	4	2	.....	.....	..	.....	.....	..	....	....	2
Saginaw	Total	20	10	.....	.....	..	5	.....	..	1	....	4
	Male	9	2	.....	.....	..	1	.....	..	1	....	....
	Female	11	8	.....	.....	..	2	.....	..	....	....	[1]
	One of each	....	5	.....	.....	..	2	.....	..	....	....	3
Sanilac	Total	10	5	.....	.....	..	3	1	..	....	1	....
	Male	5	2	.....	.....	..	2	.....	..	....	....	....
	Female	5	2	.....	.....	..	1	1	..	....	....	....
	One of each	....	1	.....	.....	..	.....	.....	..	....	1	....
Shiawassee	Total	20	10	5	1	..	3	.....	..	1	....	....
	Male	10	3	1	.....	..	1	.....	..	1	....	....
	Female	10	3	2	1	..	.....	.....	..	....	....	....
	One of each	....	4	2	.....	..	2	.....	..	....	....	....
St. Clair	Total	30	15	2	.....	..	7	1	..	3	2	....
	Male	13	4	.....	.....	..	1	.....	..	2	1	....
	Female	17	6	2	.....	..	2	1	..	1	....	....
	One of each	....	5	.....	.....	..	4	.....	..	....	1	....
St. Joseph	Total	18	9	3	5	..	1	.....	..	....	....	....
	Male	11	4	2	2	..	.....	.....	..	....	....	....
	Female	7	2	1	1	..	.....	.....	..	....	....	....
	One of each	....	3	.....	2	..	1	.....	..	....	....	....

[1] Indian.

TABLE XII.—CONTINUED.

Counties.	Sex.	Number of Individuals.	Number of Twins by Pairs.	Nativity of Parents.								
				Native.			Foreign.			Foreign Father and Native Mother.	Foreign Mother and Native Father.	Unknown Parentage.
				Both Parents from same State.	From different State.	Unknown State.	Both from same Country.	From different Countries.	Unknown State.			
Tuscola	Total	6	3	1	.....	..	1	.....	..	1	....	....
	Male	5	2½	1	.....	..	½	.....	..	1	....	....
	Unknown	1	½	.....	.....	..	½	.....	..	....	....	....
Van Buren	Total	22	11	5	4	..	1	.....	..	1	....	....
	Male	9	3	3	.....	..	.....	.....	..	....	....	....
	Female	13	5	2	2	..	1	.....	..	....	....	....
	One of each	....	3	.....	2	..	.....	.....	..	1	....	....
Washtenaw	Total	18	9	4	2	..	3	.....	..	....	....	....
	Male	9	3	1	1	..	1	.....	..	....	....	....
	Female	9	3	2	.....	..	1	.....	..	....	....	....
	One of each	....	3	1	1	..	1	.....	..	....	....	....
Wayne	Total	80	40	4	3	5	21	2	..	1	2	2
	Male	35	11	3	1	2	4	.....	..	....	1	....
	Female	42	14½	1	2	1	5½	1	..	1	1	2
	One of each	....	13	.....	.....	2	10	1	..	....	....	....
	Unknown	3	1½	.....	.....	..	1½	.....	..	....	....	....

TABLE XIII.

Occupation of Fathers of Twins Born in Michigan during the year 1870.

	No. of Each.		No. of Each.
Of all occupations	889	Liverymen	3
Agent	1	Lumbermen	3
Barber	1	Machinist	1
Basket-maker	1	Masons	3
Blacksmiths	3	Mechanic	1
Book-keepers	3	Merchants	11
Boiler-maker	1	Millers	4
Brakeman	1	Ministers	2
Brass-finisher	1	Miner	1
Cabinet-maker	1	Painter	1
Carpenters	12	Peddler	1
Chief Engineers, Fire	2	Physicians	2
Cigar-maker	1	Register of Deeds	1
Clerks	3	Sailors	2
Coopers	6	Saloon-keepers	2
Dentist	1	Shoe-makers	7
Druggist	1	Soap Manufacturer	1
Engineers	2	Steward on boat	1
Farmers	185	Tailor	1
Grocers	3	Tanner	1
Gunsmith	1	Teamsters	2
Harness-maker	1	Telegraph Operator	1
Hotel-keeper	1	Unknown	6
Joiner	1	Wagon-makers	2
Laborers	40	Watchman	1
Lawyers	3	Wheelright	1
Leather Dealer	1		

TABLE XIV.

Exhibiting, by Sex, the Parent-Nativity, and by Sex and Months the Number, of Still-births in Michigan during the Year ending December 31st, 1870.

SEX.	YEAR 1870.	MONTHS.													NATIVITY OF PARENTS.											
															Parents born in Mich.		NATIVE.				FOREIGN.					
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Father.	Mother.	Total.	Same State.	Different State.	Unknown.	Total.	Same Country.	Different Countries.	Foreign Father.	Foreign Mother.	Unknown.
Total	74	1	6	3	8	6	5	8	7	10	5	6	9	----	12	13	28	[c] 19	6	[a] 3	26	20	6	[b] 11	[d] 5	4
Males	39	1	4	2	2	4	4	2	3	5	5	4	3	----	6	7	14	7	5	2	16	12	4	6	3	----
Females	24	----	1	1	5	1	1	6	1	2	----	2	4	----	5	5	11	11	----	----	5	3	2	3	2	3
Unknown	11	----	1	----	1	1	----	----	3	3	----	----	2	----	1	1	3	1	1	1	5	5	----	2	----	1

[a] Two United States and one America. [b] Two Mothers unknown. [c] Two colored. [d] One Father unknown.

TABLE XV.

Parent-Nativity of Still-born Children. Showing, by Sex, the Number and Per cent of Total Number Born in the State of Michigan during the year 1870, of Parents who were Natives of the Same, and of Different States or Countries.

NATIVITY OF PARENTS.	STILL-BORN CHILDREN.							
	NUMBER.				PER CENT OF TOTAL.			
	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Unknown.
All Nativities	74	39	24	11	100.00	100.00	100.00	100.00
Same American or Foreign State	39	19	14	6	52.70	48.71	58.33	54.54
Different American or Foreign State	12	9	2	1	16.21	23.07	8.33	9.09
Foreign Father and American Mother	11	6	3	2	14.86	15.38	12.50	18.18
Foreign Mother and American Father	5	3	2	.....	6.75	7.69	8.33	.....
Unknown	7	2	3	2	9.45	5.12	12.50	18.18
Different State or Country	28	18	7	3	37.83	46.15	29.16	27.27
Native	28	14	11	5	37.83	35.89	45.83	27.27
Foreign	26	16	5	5	35.13	41.02	20.83	45.45

It is not very probable that anything near the whole number of still-births are returned; but the proportion per month may still be correct, as also the proportion of each sex, nativity, etc.

The order of greatest number of still-births, by months, for the year 1870, was as follows: September, 10; December, 9; July, 8; April, 8; August, 7; November, 6; May, 6; February, 6; June, 5; October, 5; March, 3; and January, 1. This order can be compared with that of the total births shown in Table II, on page 3.

The number of males to one hundred females still-born, was 162.5, while for total births the number was 108+. The greater than average excess of males among still-births is common in this and in other States, although the proportion shown here is, perhaps, unusually large. This greater excess is believed to be, mainly, in consequence of the larger heads of male infants, causing difficult and protracted labor, and thus endangering the life of the child at that time. It may also be true that the nervous system of male infants is more highly developed than that of females, and therefore more sensitive to injury, and also that they are less able to withstand injuries, because their higher nervous organization is at the expense of the digestive or more strictly animal structures, which are not as well developed in males as in females.

Whether, or not, the foregoing explanation of the main cause of the greater than average excess of males still-born, be considered adequate, the fact is now believed to be established. Of about six hundred thousand births in Massachusetts during the years 1852–1869, there were 105.8 males to 100 females. Of nearly fourteen thousand still-births returned during the same time, there were 146.6 males to 100 females. In Michigan, for the year 1869, the proportion of all births was 108.+ males to 100 females; of still-births it was 145.8 males to 100 females. These statements are not given as establishing the fact, but only as instances which might be multiplied.

Among physicians it is well known that there is a correla-

tion between many portions of the body, the cause of which is not always apparent. There also appears to be, as a rule, a peculiar harmony between the size and shape of the head of the child and the size and form of the pelvis of the mother. A comparison of Table XV. with Table VII. suggests the question whether there may not be some disturbance of this harmonious relation when the father is of one nationality and the mother is of another. Table XV may also be compared with similar ones for twins—Tables X. and XI.,—but firm conclusions must not be formed from the evidence of these particular tables alone. They appear here for the first time in this State, and probably in any State. It is only after great care and judgment have been employed in collecting and arranging the statistics, and after the results have been several times verified, that such evidence should of itself be considered conclusive.

TABLE XVI.

Exhibiting, by Sex, the Total Number, Number by Months, and Nativity of Parents of Illegitimate Children born in Michigan during the Year ending December 31st, 1870.

SEX.	YEAR 1870.	MONTHS.													NATIVITY OF MOTHERS.[a]							NATIVITY OF FATHERS.[a]						
															NATIVE.			FOREIGN.				NATIVE.			FOREIGN.			
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Born in Michigan.	Born in Other States.	Total.	Born in Canada.	Born in Other Countries.	Unknown.	Total.	Born in Michigan.	Born in Other States.	Total.	Born in Canada.	Born in Other Countries.	Unknown.
Total	155	13	13	16	13	14	13	13	12	8	15	11	13	1	86	51	35	41	12	29	28	40	20	20	16	7	9	99
Males	80	6	4	9	10	7	7	4	7	3	9	6	7	1	44	26	[b] 18	20	6	14	16	23	12	[c] 11	5	2	3	52
Females	74	7	9	7	3	7	6	8	5	5	6	5	6	----	41	25	16	21	6	15	12	17	8	9	11	5	6	46
Unknown	1	----	----	----	----	----	----	1	----	----	----	----	----	----	1	----	1	----	----	----	----	----	----	----	----	----	----	1

[a] This parent-nativity does not seem to extend back far enough. It would be interesting to know the nativity of the parents of the mothers, but this is not collected. [b] One unknown State. [c] Three unknown States.

TABLE XVII.

Exhibiting the Number of Males to 100 Females, and by Sex the Number and Per Cent of Total Number of Illegitimate Children Born of Native and Foreign Parents in Michigan during the Year ending December 31st, 1870.

NATIVITY OF PARENTS.		ILLEGITIMATE CHILDREN.								
		No. of Males to 100 Females.	NUMBER.				PER CENT OF TOTAL.			
			Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Unknown.
All Nativities		108.+	155	80	74	1	100.00	100.00	100.00	100.00
Mothers [a]	Native	107.	86	44	41	1	55.48	55.00	55.40	100.00
	Foreign	95.	41	20	21	.....	26.45	25.00	28.37	.....
	Unknown	133.	28	16	12	.....	18.06	20.00	16.21	.....
Fathers	Native	135.	40	23	17	.....	25.80	28.75	22.97	.....
	Foreign	45.	16	5	11	.....	10.32	6.25	14.86	.....
	Unknown	118.	99	52	46	1	63.87	65.00	62.16	100.00

[a] See note [a], to Table XVI.

TABLE XVIII.

Exhibiting, for the State and Counties, the Number of Females aged 16 to 45 in Michigan June 1st, 1870; the Number of such Females to one Child, to one Illegitimate Child, and to one Twin Child, Born in Michigan during the year 1870; and also the Number of Illegitimate, and Still-born Children; and Number of Males to 100 Females among Twins.

STATE AND COUNTIES.	Female Population, Aged 16 to 45, June 1, 1870.[a]	Per Cent of Total Births in 1870 to Females aged 16 to 45.[b]	No. of Females, aged 16 to 45, to one Child Born in 1870.[b]	No. of Females, aged 16 to 45, to one Illegitimate Child Born.[b]	No. of Females, aged 16 to 45, to one Pair of Twins.[b]	Twin Children—No. of Males to 100 Females.	No. of Illegitimate Children Born in Year 1870.	Number Still-born, 1870.
State	254,264	10.68	9.35	1,610	736	107	155	74
Alcona	144	18.75	5.33	[e] 144	[d] 144	----	----	----
Allegan	6,681	9.68	10.37	2,227	954	100	3	----
Alpena	548	.54	182.66	[e] 548	[d] 548	----	----	----
Antrim	387	15.24	6.55	[e] 387	387	----	----	----
Barry	4,722	9.86	10.18	944	429	340	5	----
Bay	3,306	14.51	6.88	[e] 3,306	551	100	----	1
Benzie	452	13.71	7.29	[e] 452	[d] 452	----	----	----
Berrien	7,591	8.70	11.48	1,518	948	220	5	4
Branch	5,941	8.39	11.90	1,980	990	50	3	1
Calhoun	8,377	9.17	10.90	1,162	1,626	66	7	----
Cass	4,415	9.89	10.10	735	1,471	50	6	----
Charlevoix	318	10.69	9.35	[e] 318	[d] 318	----	----	----
Cheboygan	402	8.45	11.82	[e] 402	[d] 402	----	----	----
Chippewa	330	17.27	5.78	[e] 330	165	33	----	----
Clare[c]	37	--------	--------	--------	--------	----	----	----
Clinton	4,860	11.60	8.61	2,430	694	27	2	4

[a] Law of Michigan limits age of marriage of females to not less than that of sixteen years.
[b] Only population of counties and townships represented by Births is used in computing statements in this column.
[c] No returns of Births.
[d] No Twin Births returned.
[e] No Illegitimate Births returned.

TABLE XVIII.—CONTINUED.

COUNTIES.	Female Population, aged 16 to 45, June 1, 1870. [a]	Per Cent. of Total Births in 1870 to Females aged 16 to 45. [b]	No. of Females, aged 16 to 45, to one Child Born in 1870. [b]	No. of Females, aged 16 to 45, to one Illegitimate Child Born. [b]	No. of Females, aged 16 to 45, to one Pair of Twins. [b]	Twin Children—No. of Males to 100 Females.	No. of Illegitimate Children Born in Year 1870.	Number Still-born, 1870.
Delta	428	27.71	3.60	142	[d] 428	----	2	----
Eaton	5,524	10.64	9.39	[e] 5,524	690	128	----	----
Emmet	247	18.62	5.36	20	[d] 247	----	12	----
Genesee	7,554	8.69	11.49	2,518	944	300	3	7
Grand Traverse	881	11.80	8.47	881	[d] 181	----	1	----
Gratiot	2,378	12.64	7.91	2,378	395	71	1	2
Hillsdale	7,016	8.60	11.61	1,408	637	266	5	----
Houghton [c]	2,514	----	----	----	----	----	----	----
Huron	1,593	18.89	5.29	796	796	300	2	2
Ingham	5,606	8.70	11,48	2,803	700	50	2	1
Ionia	6,087	9.64	10.36	1,217	608	100	5	----
Iosco	638	14.57	6.86	[e] 638	638	----	----	----
Isabella	809	13.47	7.42	[e] 809	809	100	----	----
Jackson	8,025	7.65	13.07	2,006	1,003	220	4	1
Kalamazoo	7,304	9.00	11.10	1,826	608	118	4	----
Kalkaska	71	21.12	4.73	71	[d] 71	----	1	----
Kent	11,107	9.80	10.19	3,702	658	128	3	2
Keweenaw [c]	727	----	----	----	----	----	----	----
Lake	108	5.55	18.00	[e] 108	[d] 108	----	----	----
Lapeer	4,456	10.03	9.96	4,456	495	80	1	----
Leelanaw	885	15.14	6.60	885	442	----	1	----
Lenawee	10,458	7.93	12.60	1,743	804	116	6	1
Livingston	4,094	11.67	8.56	[e] 4,094	1,364	20	----	----
Mackinac	334	c	c	[e] 334	[d] 334	----	----	----
Macomb	5,664	10.71	9.33	809	1,132	100	7	----
Manistee	1,251	17.18	5.81	1,251	1,251	100	1	----

[a] Law of Michigan limits age of marriage of females to not less than that of sixteen years.
[b] Only population of counties and townships represented by Births is used in computing statements in this column.
[c] No returns of Births.
[d] No Twin Births returned.
[e] No Illegitimate Births returned.

TABLE XVIII.—Continued.

COUNTIES.	Female Population, aged 16 to 45, June 1, 1870. [a]	Per Cent of Total Births in 1870 to Females aged 16 to 45. [b]	No. of Females, aged 16 to 45, to one Child Born in 1870. [b]	No. of Females, aged 16 to 45, to one Illegitimate Child Born. [b]	No. of Females, aged 16 to 45, to one Pair of Twins. [b]	Twin Children—No. of Males to 100 Females.	No. of Illegitimate Children Born in Year 1870.	Number Still-born, 1870.
Maniton [c]	185	----	----	----	----	----	----	----
Marquette	2,695	25.04	3.99	1,847	673	60	2	----
Mason	658	11.68	8.59	[e] 658	326	33	----	1
Mecosta	1,228	16.27	6.14	1,228	407	200	1	2
Menominee	319	4.07	24.53	[e] 319	[d] 319	----	----	----
Midland	681	18.06	5.58	[e] 681	227	200	----	----
Missaukee	20	10.00	10.00	[e] 20	[d] 20	----	----	----
Monroe	5,594	11.49	8.69	1,350	600	260	4	8
Montcalm	2,890	11.17	8.94	361	963	500	8	----
Muskegon	3,176	10.98	9.10	1,588	1,058	100	2	----
Newaygo	1,468	9.02	11.08	[e] 1,468	[d] 1,468	----	----	1
Oakland	9,158	6.14	12.26	9,158	1,526	200	1	----
Oceana	1,516	11.67	8.56	758	1,516	----	2	1
Ogemaw [Is part of Iosco]	2	----	----	----	----	----	----	----
Ontonagon	491	22.60	4.42	[e] 491	[d] 491	----	----	----
Osceola	408	18.38	5.44	[e] 408	408	----	----	----
Oscoda [At'ched to Alcona]	18	----	----	----	----	----	----	----
Ottawa	5,128	14.17	7.05	1,709	466	38	3	3
Presque Isle [c]	56	----	----	----	----	----	----	----
Saginaw	8,208	12.31	8.12	3,989	787	81	2	5
Sanilac	2,690	16.31	6.12	672	538	100	4	----
Schoolcraft	129	13.17	7.58	129	[d] 129	----	1	----
Shiawassee	4,545	8.82	11.33	1,515	454	100	3	1
St. Clair	7,407	13.98	7.14	2,469	493	76	3	1
St. Joseph	5,797	8.64	11.57	2,898	644	157	2	----
Tuscola	2,734	10.64	9.89	2,734	911	----	1	----

[a] Law of Michigan limits age of marriage of females to not less than that of sixteen years.
[b] Only population of counties and townships represented by Births is used in computing statements in this column.
[c] No returns of Births.
[d] No Twin Births returned.
[e] No Illegitimate Births returned.

TABLE XVIII.—CONTINUED.

COUNTIES.	Female Population, aged 16 to 45, June 1, 1870.[a]	Per Cent of Total Births in 1870 to Females aged 16 to 45.[b]	No. of Females, aged 16 to 45, to one Child Born in 1870.[b]	No. of Females, aged 16 to 45, to one Illegitimate Child Born.[b]	No. of Females, aged 16 to 45, to one Pair of Twins.[b]	Twin Children—No. of Males to 100 Females.	No. of Illegitimate Children Born in Year 1870.	Number Still-born, 1870.
Van Buren	6,806	9.60	10.40	6,806	578	69	1	3
Washtenaw	9,221	7.81	12.78	4,610	1,024	100	2	1
Wayne	27,202	13.49	7.41	1,295	680	83	21	21
Wexford	144	15.97	6.26	[e] 144	[d] 144	----	----	----

[a] Law of Michigan limits age of marriage of females to not less than that of sixteen years.
[b] Only population of counties and townships represented by Births is used in computing statements in this column.
[d] No Twin Births returned.
[e] No Illegitimate Births returned.

TABLE XIX.

Exhibiting the details concerning Triplets born in Michigan during the year ending December 31st, 1870.

COUNTIES.	Children.				Parents.		
	Month of Birth.	Color.	Sex. Male.	Sex. Female.	Birthplace of Father.	Birthplace of Mother.	Occupation of Father.
Bay	Dec.	White	1	2	Michigan.	Ireland.	Carpenter.
Hillsdale	"	"	2	1	New York.	New York.	Farmer.
Lenawee	June.	"	3	------	Michigan.	Penn.	Farmer.
Shiawassee	July	"	2	1	Canada.	New York.	Laborer.

Of the four sets of triplets born in the State during the year 1870, two were born in December, one in June, and one in July. Of the twelve children born, eight were males and four were females. All were white. Two of the fathers were born in Michigan, one in New York and one in Canada. Two of

the mothers were born in New York, one in Pennsylvania, and one in Ireland. Of the fathers, two were farmers, one a carpenter, and one a laborer.

SEX OF CHILDREN.

Although much has been written, and much more conjectured, concerning the conditions which may be supposed to control the sex of children, as well as of the young of domestic animals, and the sex of flowers of plants, so far as known to the writer, no very thorough attempt has been made to group together the evidences contained in statistics of births, marriages, and deaths, which bear directly and indirectly upon the subject of the sex of human offspring. It is proposed to begin in this Report an attempt in that direction, reserving a more complete generalization for some future occasion, when a larger amount of evidence shall have been collected, and perhaps arranged in a better manner.

A general view, by months and seasons of the year, of the relation between the sexes of all children born in the State during the year 1870, is given in Exhibit E, and the same is graphically represented in Diagram No. 2.

EXHIBIT D.

Total Births in Michigan during the Year 1870, by Sex and by Months, Equalized to 30.44 days each.

SEX.	Year 1870.	Months of Birth.												
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
Total	26,663	1576	1888	2061	2106	2234	2171	2296	2518	2641	2435	2266	2344	132
Male	13,846	829	998	1079	1124	1140	1101	1221	1299	1368	1272	1169	1175	71
Female	12,726	745	886	977	978	1082	1065	1067	1202	1263	1156	1092	1157	56
Unknown	91	2	4	5	4	12	5	8	12	10	7	5	12	5

EXHIBIT E.

Births in Michigan during the year 1870, by Sex and by Months, Equalized to 30.44 days each. Unknown Sex and unknown Months excluded.

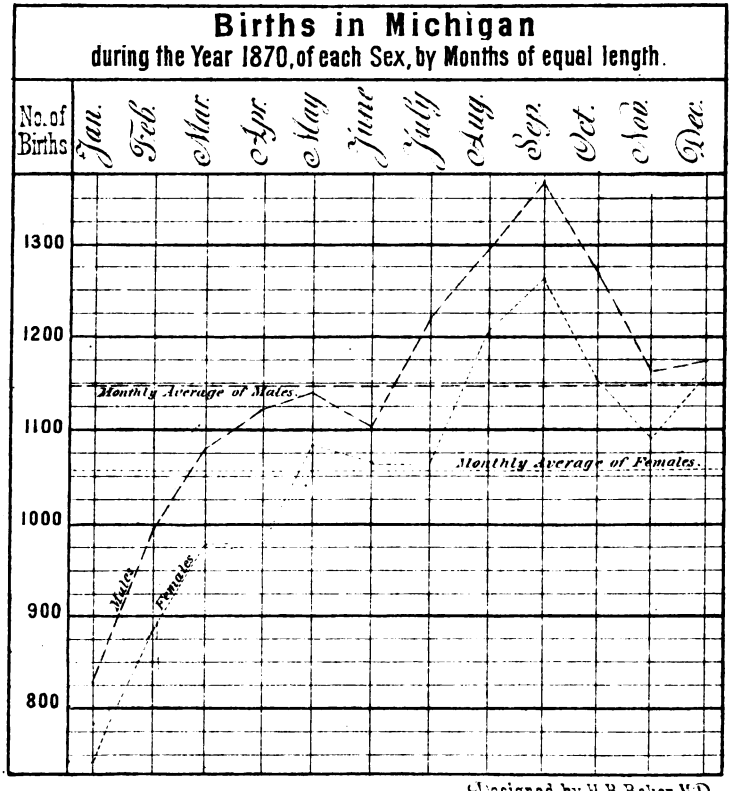
SEX.	Year 1870.	Months of Birth.											
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Total	26,445	1574	1884	2056	2102	2222	2166	2288	2501	2631	2428	2261	2332
Male	13,775	829	998	1079	1124	1140	1101	1221	1299	1368	1272	1169	1175
Female	12,670	745	886	977	978	1082	1065	1067	1202	1263	1156	1092	1157

In registration reports heretofore, no notice appears to have been taken of the proportion of each sex among twins. It will be seen from Table IX. that by pairs there were 110 males to 100 females, 109 pairs of males to 100 pairs one of each sex. There were 100.9 pairs consisting of one of each sex to 100 pairs both females. By pairs, then, the order of proportion was, both males 110. +, one of each sex 100.9, both females 100. If, however, all the twin children be taken together, the proportion of males to 100 females was only 107 +, being less than the average proportion among all children born, which was 108.8. The study of sex of twins by pairs seems to be the most satisfactory method; but in the Reports from other States, and previous Reports in this State, no data have been found.

In Michigan, it appears that during the year 1869 the number of males to 100 females in all births was 108+, and among twins 110+. In Massachusetts, in 1868 the number of males to 100 females in all born was 105.6; among twin children it appears to have been 105.7. In the same State, among all born during the year 1869 it was 106.+, among twin children 115+; and during the year 1870, in all born 107.4, among twins 109.9.

So far as the evidence has been examined, it seems that the proportion of males is greater among twins than of all children born. The same may be said concerning triplets.

DIAGRAM No 2.



Designed by H. B. Baker, M.D.

Among illegitimate children in this and in other States, the proportion of females is usually larger than it is for the total births. This is true of the illegitimate children born in Michigan during the year 1870, but only by a small fraction. Of all births in 1870, the number of males to 100 females was 108.8; of the illegitimate, the number was 108.1. Of all births in Michigan during the year 1869, the number of males to 100 females was 108.5; of the illegitimate children the number was 85+. In Massachusetts, from 1852 to 1869 the number of males to 100 females in all births was 105.8, while the number among the illegitimate children born during that period was 96.2.

TABLE XX.

Exhibiting by Months the Relation between the Total Number of Conceptions, and the Proportion of each Sex Conceived, during certain Months of the Years 1869–70, and Born during the Year ending December 31st, 1870.

CONCEPTIONS FOR BIRTHS IN 1870.[a]

	Months of 1869 and 1870 of Conceptions of Births in 1870, in order by Number, the least Number first.	Total No. of Conceptions.[b]		Months of 1869 and 1870, in order by Number of Males to 100 Females, the greatest Number first.	No. of Males to 100 Females.
Less than an Average No. of Conceptions.	April	1,574	More than an Av. proportion of Males.	July	114.98
	May	1,884		October *	114.44
	June	2,058		May	112.63
	July	2,102		April	111.84
	September	2,166		June	110.45
Average		2,204		January, 1870 *	110.11
More than an Average No. of Conceptions.	August	2,222	Average		108.80
	February, 1870	2,261	Less than an Av. proportion of Males.	December	108.36
	October	2,288		November	108.08
	March, 1870	2,382		February, 1870	107.06
	January, 1870	2,428		August	105.85
	November	2,501		September *	103.33
	December	2,681		March, 1870	101.61

[a] Equalized to months of 30.44 days each, and excluding unknown sex and unknown months.

[b] For the purposes of this study the time of conception is presumed to be nine calendar months previous to the month of birth.

* Exceptions to rule that more than an average proportion of males were conceived in months in which less than an average total number of conceptions occurred, and less than an average proportion of males in months in which more than an average number of conceptions occurred.

TABLE XXI.

Exhibiting by Months the Relation between the Total Number of Conceptions, and the Total Number of Deaths which occurred in the Months of the Years 1869–70, in which were Conceived the Children born during the Year ending December 31st, 1870.

Deaths.			Conceptions.		
	Months[a] of 1869 and 1870 of Conceptions of Births in 1870, arranged in order by Total Number of Deaths, the least Number first.	Total Number of Deaths.		Months[a] of 1869 and 1870 of Conceptions of Births in 1870, in order by Number, the least Number first.	Total Number of Conceptions.[b]
Less than the Average Number of Deaths.	January, 1870	414	Less than an Average Number of Conceptions.	April *	1,574
	February, 1870	602		May	1,884
	June	639		June	2,056
	May	640		July	2,102
	July	675		September *	2,166
	November	696		Average	2,204
Average		708			
More than the Average Number of Deaths.	March 1870	711	More than an Average Number of Conceptions.	August	2,222
	April	722		February, 1870 *	2,261
	December	821		October	2,288
	October	858		March, 1870	2,382
	August	1,049		January, 1870 *	2,428
	September	1,212		November *	2,501
				December	2,631

[a] Equalized to months of 30.44 days each, excluding unknown months and unknown sex.
[b] See note (b) to Table XX.
* Exceptions to rule that there were more than an average number of conceptions in months in which more than an average number of deaths occurred, and less than an average number in months in which less than an average number of deaths occurred.

TABLE XXII.

Exhibiting by Months the Relation between the Total Number of Deaths, and the proportion of each Sex Conceived during the same Months of the Years 1869 and 1870, and Born during the Year ending December 31st, 1870.

Deaths.			Conceptions.[b]		
	Months[a] of 1869 and 1870 of Conceptions of Births in 1870, arranged in order by Total Number of Deaths, the least Number first.	Total Number of Deaths.		Months[a] of 1869 and 1870, in order by Number of Males to 100 Females, the greatest Number first.	Number of Males to 100 Females.
Less than an Average Number of Deaths.	January, 1870	414	More than an Average proportion of Males.	July	114.98
	February, 1870	602		October *	114.44
	June	639		May	112.68
	May	640		April *	111.84
	July	675		June	110.45
	November	669		January, 1870	110.11
Average		708	Average		108.80
More than an Av'age Number of Deaths.	March, 1870	711	Less than an Average proportion of Males.	December	108.36
	April	722		November *	108.08
	December	821		February, 1870 *	107.06
	October	858		August	105.85
	August	1,049		September	103.33
	September	1,212		March, 1870	101.61

[a] Equalized to months of 30.44 days each, excluding unknown months and unknown sex.
[b] See note (b) to Table XX.
* Exceptions to rule that more than an average proportion of males were conceived in months in which less than an average number of deaths occurred, and less than an average proportion of males in months in which more than an average number of deaths occurred.

For the purpose of studying the conditions influencing the sex of children, the time of birth is considered of secondary, and the time of conception of primary importance; although precisely when, as well as how, the sex is determined may still be a proper question upon which to obtain and study evidence,

which will doubtless be mainly obtained through a study of embryology. It is known, however, that the time does not extend over any considerable portion of the period of gestation, and perhaps as useful a method of study as any may be to consider the conditions existing nine calendar months previous to the time when the births occur. The births are at present compiled by calendar months. Supposing the conceptions to occur nine calendar months previous to the month of birth, Table XX. shows that a greater than an average proportion of males were conceived in months in which less than an average total number of conceptions occurred, and less than an average proportion of males in months in which more than an average total number of conceptions occurred. This rule holds in nine out of twelve cases; the exceptions being for the months of January, September, and October. Table XXI. shows that there were more than an average number of conceptions in months in which there were more than an average number of deaths, and less than an average number in months in which less than an average number of deaths occurred. There were five exceptions to this rule, being for the months of January, February, April, September, and November. Table XXII. shows, what might perhaps be inferred from the two preceding, that a greater than an average proportion of males were conceived in months in which there were less than the average number of deaths, and less than an average proportion of males in months in which more than an average number of deaths occurred.

It seems a fair inference from the evidence in Table XX., that causes tending to increase the birth-rate tend also to increase the proportion of female offspring, this being equivalent to decreasing the proportion of males. It will be seen also by comparing the right-hand side of Tables III. and XXII., that less than the average proportion of males were conceived in months in which the greatest number of marriages occurred, and a greater than average

proportion of males in months in which there were less than the average number of marriages. To this rule there were three exceptions.

Whether or not subsequent observation shall confirm the evidence in Table XXI., it may be well to have in mind the essential nature of reproduction, which is a method of division varying much in extent among different kinds of animals, but always tending towards death, unless held in check by some opposing force: In some lower forms of life, involving total destruction of the parent, in some cases by entire separation of the matter to form new beings, and in others by abstracting with a much smaller quantity of substance some force or quality essential to a continued existence. In other words, there is a universal law of reproduction applicable to all living things, animal and vegetable, and which acts apparently in opposition to the forces tending to build up and maintain the individual parent organism. This law was published by Herbert Spencer in the Westminster Review in 1852, since when many facts in harmony therewith have been observed. Extended discussion of the law will not be attempted here, but it may be remarked in passing, that the fact that married people may live longer than single is entirely compatible with the law, for within certain limits constant change and disintegration, and renewed organization, are prominent conditions of normal life.

The fact indicated in Table XXII., if hereafter established, will doubtless be susceptible of more than one explanation. The evidence, however, seems to be in a direction opposite to some collected elsewhere, if we suppose the generalization embodied in the following quotation to have been sustained by the facts proven. On page 119, Registration Report of Kentucky for the year 1853, it is stated that "Certain observations made by Villerme of Paris, and by Dr. Emerson of Philadelphia, go to show that certain causes, as great heat of summer, overworking, and underfeeding, prevalence of epidemics, illegitimacy, in short, whatever tends to depress the physical

and moral powers, tends also to diminish fecundity, and at the same time to reduce the excess of male births; that these causes may operate so as even to produce an excess of females." It seems to be quite generally assumed that male offspring results from a higher development of the embryo than occurs in the production of female offspring. On the other hand, evidence is not wanting which tends to show that, as a rule, greater vigor of the female parent at least, and perhaps of both parents, is connected with the production of female than with male offspring. If the cause of the excess of males still-born suggested on page 65 be to a certain extent true, then the males may be considered as both of a higher and a lower organization than the females; higher as regards cerebral development and nervous power, but lower as regards development of the digestive organs and assimilative power; perhaps not absolutely lower, but relatively so to the increased demands upon the system which result from excess of nervous activity. A full knowledge of the physiological characteristics of the two sexes, combined with such evidence as may be collected in this manner, ought to enable us in due time to determine the causes influencing favorably or unfavorably the structural formation of either sex.

MARRIAGES.

The total number of marriages returned as having been solemnized in the State of Michigan during the year 1870 was 9,160.

The average number of marriages during specified periods of time was as follows:

Average number per quarter	2,290.00
Average number per month	763.33
Average number per week	176.15
Average number per day	25.09

The actual number and per cent of marriages returned previous to November 1st, 1871, which were solemnized in each quarter of the year 1870, is shown in Table I. The table also includes the same information concerning the two previous years; the statements for which, however, do not agree with those in former reports, for the reason that they have been corrected by adding the marriages which were solemnized in those years but not returned in time to be included in the reports. This correction was somewhat important, especially for the last quarter in each year, because of an error by county clerks in the manner of making their returns; many clerks returning only the marriages recorded within the year for which the return was made, instead of the whole number solemnized. The law allows ministers and justices of the peace ninety days within which time to record with the county clerk all marriages solemnized by them; consequently some marriages solemnized during the last quarter of the year are not recorded until during the first quarter of the succeeding

year. The returns by the county clerks should have included all solemnized during the year for which the returns were made. The number stated in previous reports has also been increased somewhat by marriages recorded with the county clerks long after the time allowed by law had passed. Considering the moral and legal standing of those who are authorized to solemnize marriages, and whose duty it is made by law to record them within a specified time, it seems proper to assume that their failure heretofore to comply more strictly with the law was due to ignorance of its precise requirements. It is therefore reasonable to hope that a sense of their responsibility for the truth in the matter will induce them to immediately inform themselves of the exact provisions of the law and conform thereto. It will then be entirely possible to collect the details concerning every marriage solemnized in the State. How much the statement for the year 1870 will be increased, and the proportion by quarters changed, by corrections hereafter, may perhaps be inferred from comparison of the several quarters in the different years as corrected, and with the statements as originally returned and published as shown in Exhibit A. A comparison of the exhibit with Table I. will show how much change has been effected in the statements for 1868 and 1869.

Table I. is made to include all the marriages for the three years stated, which were returned previous to November, 1871.

TABLE I.

Marriages by Quarters of the Year; Showing Number, and Per Cent of Total, for the Years 1868, 1869, and 1870.

QUARTER ENDING WITH	1868.		1869.		1870.	
	No. of Marriages.	Per Cent of Total.	No. of Marriages.	Per Cent of Total.	No. of Marriages.	Per Cent of Total.
March	1,521	17.67	2,285	22.42	2,429	26.51
June	1,806	20.98	2,245	22.03	2,081	22.71
September	2,148	24.96	2,417	23.72	2,073	22.63
December	3,122	36.28	3,223	31.63	2,560	27.94
Unknown	8	.09	18	.17	17	.18
Total	8,605	100.00	10,188	100.00	9,160	100.00
Average [a]	2,151	25.00	2,547	25.00	2,290	25.00

[a] The number in unknown quarter of year included.

EXHIBIT A.

Marriages by Quarters of the Year; Showing Number, and Per Cent of Total, for the Years 1868, 1869, and 1870, as Originally Returned and Published in Reports.

QUARTER ENDING WITH	1868.		1869.		1870.	
	No. of Marriages.	Per Cent of Total.	No. of Marriages.	Per Cent of Total.	No. of Marriages.	Per Cent of Total.
March	1,377	20.05	2,167	25.61	2,429	26.51
June	1,667	24.13	2,097	24.79	2,081	22.71
September	1,886	27.46	2,154	25.46	2,073	22.63
December	1,924	28.16	2,024	23.92	2,560	27.94
Unknown	12	.17	17	.20	17	.18
Total	6,866	100.00	8,459	100.00	9,160	100.00
Average [a]	1,716	25.00	2,114	25.00	2,290	25.00

[a] Including those in unknown quarter of year.

TABLE II.

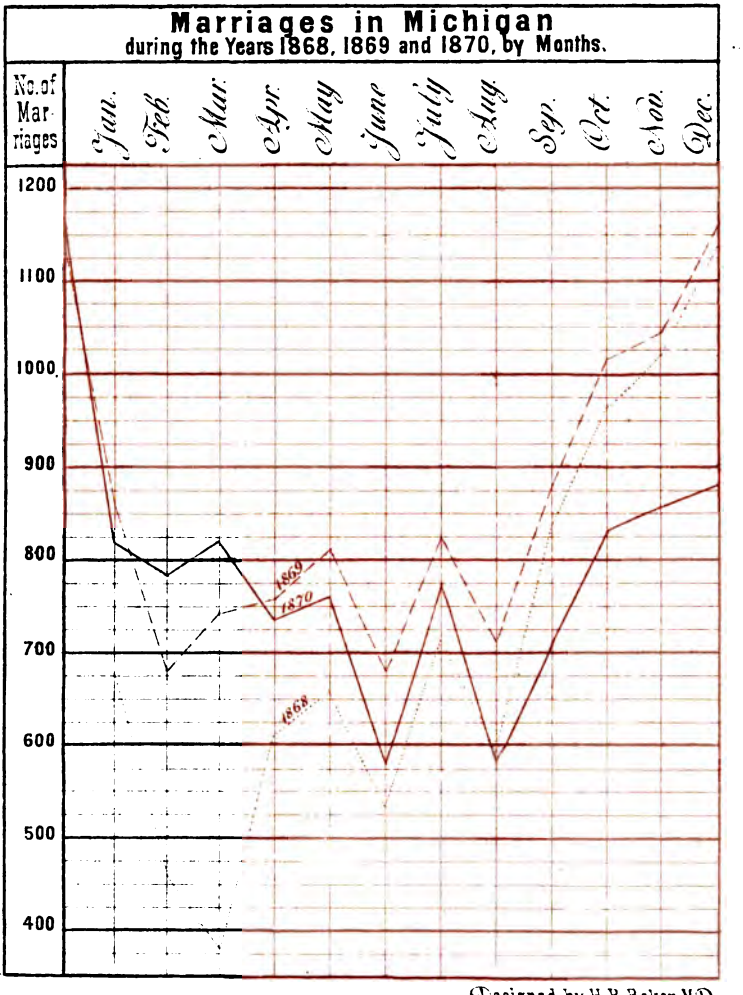
Marriages by Months, arranged in Order by Number, for the Years 1868, 1869, and 1870.

Order.	MONTHS.	1868. Number.	1868. Per Cent of Total.	MONTHS.	1869. Number.	1869. Per Cent of Total.	MONTHS.	1870. Number.	1870. Per Cent of Total.
	Total	8,605	100.00	Total	10,188	100.00	Total	9,160	100.00
1	December	1,135	13.19	December	1,158	11.36	December	[a] 878	9.58
2	November	1,021	11.86	November	1,047	10.27	November	[a] 855	9.33
3	October	966	11.22	October	1,018	9.99	October	[a] 827	9.02
4	September	840	9.76	September	881	8.64	January	823	8.98
5	July	716	8.32	January	857	8.41	March	821	8.96
6	January	678	7.87	July	824	8.08	February	785	8.56
7	May	661	7.68	May	811	7.96	July	774	8.44
8	April	611	7.10	April	758	7.44	May	761	8.30
9	August	592	6.87	March	747	7.33	April	735	8.02
10	June	534	6.20	August	712	6.98	September	713	7.78
11	February	460	5.34	February	681	6.68	August	586	6.39
12	March	383	4.45	June	676	6.63	June	585	6.38
	Unk. months	8	.09	Unk. months	18	.17	Unk. months	17	.18
	Average [b]	717.08	8.33	Average [b]	849	8.33	Average [b]	763.33	8.33

[a] Not all returned by clerks of some counties, who returned only those recorded in 1870, instead of all marriages solemnized in that year.
[b] Including those for unknown months.

A special effort was made by the State Department, by circulars and correspondence, to obtain a return of all the marriages solemnized during the year 1870; but it seems probable from an examination of Table II. and Diagram No. 3, that many marriages solemnized during the last three months of the year have not yet been returned to this Department. Diagram No. 3 also shows a variation in the line for 1868, compared with those for the other two years, for

DIAGRAM No 3.



Designed by H.B. Baker, M.D.

the months at the close of the first and beginning of the second collection year, which was April 5th, 1868. It appears very probable that many marriages during March, some in February, and nearly all during the first five days of April, 1868, have not yet been returned; perhaps partly for some reason connected with the awkward time of ending the collection year, and partly because it was the first year in which the law was in effect, and its provisions were not yet generally understood. The corrected statement for the year 1869, as shown in Table II. and Diagram No. 3, is probably nearer correct by months than either the one for 1868 or 1870. But after obtaining the actual number solemnized in each calendar month, something further is necessary in order to make the months comparable, because they are not all of the same length. The result of their equalization for the years 1869 and 1870 may be seen in Exhibits B. and C.

EXHIBIT B.

Marriages in Michigan during the Year 1869, Corrected to November, 1871, and Equalized to uniform Months of 30.44 days each.

	Year 1869.	Months.												
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
As returned....	10,188	857	681	747	757	811	676	824	712	881	1018	1047	1158	18
Am't added or subtracted...	.....	-15	+60	-13	+11	-14	+10	-15	-13	+12	-18	+16	-21	....
As equalized...	10,188	842	741	734	769	797	686	809	699	893	1000	1063	1137	18

Average month, excluding unknown months, 847.5. Average month, including unknown months, 849.

EXHIBIT C.

Marriages in Michigan during the Year 1870, Equalized to uniform Months of 30.44 days each.

	Year 1870.	Months.												
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
As returned....	9,160	823	785	821	735	761	585	774	586	713	827	855	878	17
Am't added or subtracted....	.....	-17	+69	-17	+11	-16	+9	-16	-12	+11	-17	+13	-18	....
As equalized...	9,160	806	854	804	746	745	594	758	574	724	810	868	860	17

Average month, excluding unknown months, 768.83. Average month, including unknown months, 764.75.

It will doubtless be noticed that in making the foregoing comments the writer has, to a certain extent, assumed the existence of general laws which control the proportion of marriages by seasons of the year. This assumption is not entirely based upon the evidences in this State; it is supported by evidence obtained from the statistics of other States and cities; but it appears to be fully warranted by the statistics in this State, so far as they have been collected. It will be seen by Diagram No. 3, that the several lines representing the marriages for the years 1868, 1869, and 1870 bear a striking resemblance to each other. To the writer there appear no variations but such as are susceptible of reasonable explanation as to the cause.

In each of the three years the number of marriages has increased in each month from August until December, in which month the greatest number were solemnized. In 1869 and 1870 the least number occurred in June, and in every year, so far, there was an increased number in July over those in June and August. Possibly this

increased number is more or less closely connected with, and caused by, prevalent social customs in observance of the national anniversary on the fourth of July. The censuses of New York city for the years 1855 and 1865 show that in that city in each of the census years the greatest number of marriages were solemnized in the month of May. It seems probable that this may have been caused by the very general custom of moving on the first of May, and the opportunities thus afforded for beginning house-keeping at about that time. Doubtless marriages are much influenced by social and business considerations; but two facts shown on pages five and seven of this report,—that more than an average proportion of births result from conceptions at certain seasons of the year when there were more than an average proportion of marriages, and that there were more births at such seasons than could be accounted for by the increased number of marriages,—these two facts seem to indicate a physiological reason for the increased proportion of marriages at such seasons.

TABLE III.

Distinguishing, by Counties and by Months, the Number of Marriages Returned as having been Solemnized during the Year ending December 31st, 1870.

STATE AND COUNTIES.	Year 1870.	Months.												
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
State	9,160	828	785	821	735	761	585	774	586	718	827	855	878	17
Alcona	8	1	1	----	1	2	----	----	----	----	1	1	1	----
Allegan	277	24	29	26	33	15	18	20	22	11	23	33	23	----
Alpena [a]	6	----	----	----	----	----	----	----	----	----	2	2	2	----
Antrim	16	1	1	1	3	1	1	----	2	----	1	2	3	----
Barry	169	17	18	19	18	20	8	10	10	9	12	15	13	----
Bay	125	7	10	10	8	13	15	13	8	8	14	8	11	----
Benzie	18	1	2	1	1	3	----	1	2	1	3	1	2	----
Berrien	288	31	35	30	32	24	25	33	19	19	16	15	9	----
Branch	265	30	24	28	22	16	17	12	15	16	31	28	31	----
Calhoun	280	25	22	28	19	23	24	16	14	18	18	36	36	1
Cass	188	25	17	21	11	13	12	8	8	15	14	21	23	----
Charlevoix	18	----	----	3	1	1	1	----	3	1	3	2	3	----
Cheboygan	14	2	2	1	1	----	1	1	2	1	1	1	1	----
Chippewa	13	2	1	3	----	----	----	1	----	1	4	----	1	----
Clare [b c]	------	----	----	----	----	----	----	----	----	----	----	----	----	----
Clinton	177	20	18	19	11	18	6	14	6	11	18	18	18	----
Delta	21	4	----	----	----	1	3	2	2	4	3	1	1	----
Eaton	211	21	22	19	27	14	17	19	10	19	14	10	19	----
Emmet	11	1	3	----	----	2	1	2	----	1	1	----	----	----
Genesee	306	21	31	27	25	17	19	38	20	22	28	24	34	----
Grand Traverse	20	3	4	----	3	3	3	1	2	----	----	1	----	----

[a] Not all returned. County clerk says records were burned in court-house in Dec., 1870.
[b] Organized by the Legislature of 1871.
[c] No returns.

TABLE III.—CONTINUED.

COUNTIES.	Year 1870.	Months.												
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
Gratiot	74	9	7	5	1	6	6	6	7	8	4	5	10	....
Hillsdale	320	28	31	31	24	29	18	23	21	22	26	33	34	....
Houghton [c]	.....	....	....	....	....	....	....	....	....	....	....	....	....	....
Huron	72	5	8	6	5	11	3	4	4	8	5	7	6	....
Ingham	208	17	11	16	20	14	11	22	21	18	15	23	19	1
Ionia	211	13	17	12	17	15	12	15	15	23	21	17	33	1
Iosco	23	1	2	1	1	5	2	4	2	3	2	3	2	....
Isabella	37	5	2	3	8	4	1	3	....	1	3	4	3	....
Jackson	214	21	23	29	12	19	12	23	11	23	24	12	5	....
Kalamazoo	330	37	21	25	20	23	27	21	22	27	30	37	40	....
Kalkaska [b c]	.....	....	....	....	....	....	....	....	....	....	....	....	....	....
Kent	399	28	28	41	36	35	25	28	27	35	41	45	30	....
Keweenaw [c]	.....	....	....	....	....	....	....	....	....	....	....	....	....	....
Lake [b c]	.....	....	....	....	....	....	....	....	....	....	....	....	....	....
Lapeer	184	21	15	16	16	16	12	19	10	10	12	19	18	....
Leelanaw	29	6	2	2	4	2	2	1	2	1	7	....	....	....
Lenawee	393	42	34	35	30	27	21	23	27	31	43	32	43	....
Livingston	108	10	8	12	13	7	9	13	5	7	3	5	16	....
Mackinac	16	2	2	....	3	4	....	....	2	1	2	....	....	....
Macomb	206	19	24	16	14	16	6	19	15	18	15	23	21	....
Manistee	81	2	2	5	10	1	5	10	11	12	11	11	1	....
Manitou [c]	.....	....	....	....	....	....	....	....	....	....	....	....	....	....
Marquette	145	12	7	8	10	7	14	13	7	16	24	15	12	....
Mason	25	1	2	2	4	1	1	4	1	5	....	2	1	1
Mecosta	56	4	4	5	3	5	....	9	5	1	11	3	6	....
Menominee	4	....	....	....	....	1	....	....	....	1	2	....	....	....
Midland	29	2	1	2	2	1	1	6	....	4	2	5	3	....
Missaukee [b]	1	....	....	1	....	....	....	....	....	....	....	....	....	....
Monroe	204	28	28	13	12	22	9	14	16	16	12	17	15	2
Montcalm	90	9	7	10	10	7	5	12	2	8	5	2	13	....

[b] Organized by the Legislature of 1871.
[c] No returns.

TABLE III.—CONTINUED.

COUNTIES.	Year 1870.	MONTHS.												
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
Muskegon	101	8	8	7	3	7	6	5	6	6	14	16	15	----
Newaygo	47	8	3	2	4	7	4	3	4	3	3	4	2	----
Oakland	311	27	20	38	24	19	10	22	13	37	35	26	40	----
Oceana	54	8	3	9	4	2	4	6	5	3	2	2	6	----
Ontonagon	9	1	----	----	----	----	2	----	----	2	1	2	1	----
Osceola	14	----	2	1	3	1	3	----	1	----	1	----	2	----
Ottawa	180	15	8	19	14	19	12	14	19	15	12	15	18	----
Presque Isle [b]	------	----	----	----	----	----	----	----	----	----	----	----	----	----
Saginaw	309	28	19	17	24	36	21	41	16	19	22	43	23	----
Sanilac	91	9	5	10	11	9	10	8	5	6	7	7	4	----
Schoolcraft [b]	2	----	----	----	----	----	----	----	----	----	2	----	----	----
Shiawassee	114	9	6	8	11	13	10	9	7	9	15	9	8	----
St. Clair	285	35	24	20	11	30	14	32	25	21	25	29	19	----
St. Joseph	231	22	16	21	21	22	15	23	7	15	12	25	32	----
Tuscola	97	5	12	7	2	9	11	9	7	9	12	7	7	----
Van Buren	208	17	17	21	23	13	15	23	11	8	17	15	26	2
Washtenaw	288	13	35	32	18	19	17	18	20	27	21	32	36	----
Wayne	919	59	81	80	70	91	58	73	61	77	99	84	77	9
Wexford	5	1	----	2	1	----	----	----	1	----	----	----	----	----

[b] Organized by the Legislature of 1871.

TABLE IV.

Showing, by Color and by Sex, the Population June 1st, 1870, the Number of Marriages, the Number, and Per Cent of Total Number, of Persons Married in Michigan during the Year 1870, and the Per Cent of Persons Married to Population.

		Population.[a]	Number of Marriages.	Persons Married.		Per cent of Persons Married, to Population.
				Number.	Per Cent of Total No.	
All Colors	Total	1,168,610	9,160	18,320	100.00	1.574
	Male	606,628	.....	9,160	50.00	1.509
	Female	556,982	.....	9,160	50.00	1.644
White	Total	1,146,170	8,388	16,788	91.61	1.464
	Male	597,529	.....	8,391	45.80	1.404
	Female	548,681	.....	8,392	45.80	1.529
Black [b]	Total	5,524	84	165	.90	2.986
	Male	3,042	.....	84	.45	2.761
	Female	2,482	.....	81	.44	3.263
Mulatto [b]	Total	6,197	2	5	.02	.080
	Male	3,128	.....	2	.01	.063
	Female	3,069	.....	3	.01	.097
Indian [b]	Total	5,598	56	97	.52	1.734
	Male	2,862	.....	48	.26	1.677
	Female	2,731	.....	49	.26	1.794
Unknown Colors [b]	Total	.....	635	1,270	6.93	.....
	Male	.....	.....	635	3.46	.....
	Female	.....	.....	635	3.46	.....
Black and Mulatto	Total	11,721	86	170	.92	1.450
	Male	6,170	.....	86	.46	1.393
	Female	5,551	.....	84	.45	1.513

[a] Of counties from which returns of marriages were received.
[b] See notes to Table V.

TABLE V.

Showing, for the State and Counties, the Number of Marriages in Michigan during the Year 1870, the Number of White Persons, and, by Color, the Number of Marriages where one or both parties were Other than White.

STATE AND COUNTIES.	Marriages, 1870.	Color.				
		White.	Black.	Mulatto.	Indian.	Unknown.
State	9,160	8,383	*84	†2	‡56	635
Alcona	8	8	.....	....	....	....
Allegan	277	277	.....	....	....	....
Alpena	6	6	.....	....	....	....
Antrim	16	16	.....	....	....	....
Barry	169	167	.....	....	....	2
Bay	125	81	[a] 1	....	7	36
Benzie	18	18	.....	....	....	....
Berrien	288	269	[a] 1	....	....	18
Branch	265	263	.....	....	....	2
Calhoun	280	249	[a] 5	....	[f] 1	25
Cass	188	169	[a] 14	[e] 1	....	4
Charlevoix	18	17	.....	....	1	....
Cheboygan	14	14	.....	....	....	....
Chippewa	13	5	.....	....	[g] 8	....
Clinton	177	177	.....	....	....	....
Delta	21	16	.....	....	....	5
Eaton	211	210	1	....	....	....
Emmet	11	.....	.....	....	[b] 11	....
Genesee	306	304	[a] 2	....	....	....
Grand Traverse	20	20	.....	....	....	....
Gratiot	74	73	.....	....	....	1
Hillsdale	320	317	[b] 1	....	....	2

TABLE V.—CONTINUED.

COUNTIES.	Marriages, 1870.	Color.				
		White.	Black.	Mulatto.	Indian.	Unknown.
Huron	72	72	----	----	----	----
Ingham	208	207	----	----	----	1
Ionia	211	205	[c] 1	----	----	5
Iosco	28	27	----	----	----	1
Isabella	37	29	----	----	[c] 6	2
Jackson	214	89	[a] 5	----	----	120
Kalamazoo	330	309	[i] 9	----	----	12
Kent	399	396	[d] 2	1	----	----
Lapeer	184	183	----	----	----	1
Leelanaw	29	25	----	----	4	----
Lenawee	398	67	[j] 4	----	1	321
Livingston	108	106	----	----	----	2
Mackinac	16	5	----	----	[i] 10	1
Macomb	206	206	----	----	----	----
Manistee	81	73	----	----	----	8
Marquette	145	145	----	----	----	----
Mason	25	23	----	----	----	2
Mecosta	56	56	----	----	----	----
Menominee	4	3	----	----	[k] 1	----
Midland	29	29	----	----	----	----
Missaukee	1	1	----	----	----	----
Monroe	204	179	----	----	----	25
Montcalm	90	76	----	----	----	14
Muskegon	101	97	----	----	----	4
Newaygo	47	47	----	----	----	----
Oakland	311	301	[a] 6	----	----	4
Oceana	54	49	----	----	5	----
Ontonagon	9	9	----	----	----	----
Osceola	14	12	----	----	----	2
Ottawa	180	179	1	----	----	----
Saginaw	309	303	[b] 1	----	1	4

TABLE V.—CONTINUED.

COUNTIES.	Marriages, 1870.	COLOR.				
		White.	Black.	Mulatto.	Indian.	Unknown.
Sanilac	91	91	------	----	----	----
Schoolcraft	2	2	------	----	----	----
Shiawassee	114	114	------	----	----	----
St. Clair	285	285	------	----	----	----
St. Joseph	281	281	------	----	----	----
Tuscola	97	90	------	----	----	[k]
Van Buren	208	208	------	----	----	----
Washtenaw	288	282	[j] 2	----	----	[k]
Wayne	919	891	[a] 28	----	----	----
Wexford	5	5	------	----	----	----

* Only 7 couples were returned as black, while there were 62 as African, 12 as colored, 1 as colored male and white female, 1 as black male and white female, and one as black male and mulatto female.

† One couple returned as mulatto, and one as African and Indian.

‡ Of the 56 couples there were 34 in which both parties were Indian, 5 couples in which the males were white, 1 male white and Indian, 2 females white, 1 female African, and 3 females white and Indian; of the 10 remaining couples, 3 males were white, 6 white and Indian, and 1 Indian, 4 females were white, and 6 white and Indian.

[a] Returned as "African."

[b] Returned as "colored."

[c] One female white.

[d] One mulatto female.

[e] African and Indian male.

[f] African female

[g] White and Indian 3 couples, white males 4, white female 1.

[h] White and Indian male, 1.

[i] White males 3, females 4; white and Indian males 6, females 6; Indian male 1.

[j] African, one couple.

[k] One white male.

[l] Eight and one-half couples "colored,"—one female white.

The sixth column, headed "Unknown," in Table V., furnishes a general criticism on the lack of proper performance of duty by the justices of the peace, ministers of the gospel, or county clerks, in the several counties having figures opposite them in this column. It is by law the duty of the first named persons to know and furnish for record with the county clerk a statement of the color of all persons married by them, and of the county clerk to record and return the same to this Department. To which of the three classes of persons above named the omissions are chargeable, is a question to be answered in each county for itself.

TABLE VI.

Exhibiting, by Sex, the Nativity of Persons Married in Michigan during the Year 1870; Population Represented by Returns of Marriages; and Per Cent of Persons Married to Population of same Nativity.

NATIVITY.	MARRIAGES, 1870.		POPULATION.[a]			PERSONS MARRIED.					
						Number.			Per Cent of Persons Married to Population of same Nativity.		
	Number.	Per Cent of Total.[b]	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.
Total	9,160	100.00	1,163,610	606,628	556,982	18,320	9,160	9,160	[c] 1.57	[c] 1.50	[c] 1.64
Native	5,554	60.63	909,063	465,647	443,416	12,781	6,191	6,590	1.40	1.32	1.48
Foreign	1,621	17.69	254,547	140,981	113,566	4,915	2,657	2,258	[d] 1.93	[d] 1.88	[d] 1.98
Foreign Male and Native Female	1,036	11.31	.....	.....	.....	.....	.....	.....	.....	.....	.....
Foreign Female and Native Male	637	6.95	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nativity Unknown	312	3.40	.....	.....	.....	624	312	312	.05	.05	.05
One or Both Native	7,227	78.89	.....	.....	.....	.....	.....	.....	.....	.....	.....
One or Both Foreign	3,294	35.96	.....	.....	.....	.....	.....	.....	.....	.....	.....

[a] Except of counties from which no returns of marriages in 1870 were received.
[b] Compare this column with similar one for Births, being the fifth column in Table VII., page 39. Allowance should be made for married immigrants.
[c] If, of the population of counties represented by returns of marriages, only persons at the ages at which marriages occurred in 1870 be taken, this per cent would be as follows: Total 2.53, males 2.55, females 2.50. But in 1870 marriages occurred of females aged only thirteen years, and including the female population at these younger ages makes the per cent of females married appear too small, although it is probably a more useful view than the one in the table above, which, however, is given here as a means of comparison between the Native and Foreign.
[d] See comments on Table VII., page 41.

TABLE VII.

Showing, for all Persons Married in Michigan during the Year 1870, by Total, and by Sex, the Age, in Years and Periods of Years; the Per Cent of those at each Age to Total of all Ages; the Population, by Sex, Represented by Returns of Marriages; and, by Sex, the Per Cent of Persons Married, to Population of same Age and Period of Age.

Ages, In Years and Periods of Years.	Marriages.					Population at each Age and Period.[a]		Per Cent of Marriages to Population of Corresponding Age.	
	Total No. of Persons Married at each Age and Period.	Males.		Females.					
		Number Married.	Per Cent of Total No. of Marriages.	Number Married.	Per Cent of Total No. of Marriages.	Males.	Females.	Males.	Females.
All ages[b]	18,320	9,160	100.00	9,160	100.00	358,020	365,412	2.55	2.50
13 years	3	.....	.....	[c] 3	.03	.....	13,068	.....	.02
14	21	.....	.....	[c] 21	.22	.....	12,752	.....	.16
15	92	.....	.....	[c] 92	1.00	.....	11,562	.....	.79
16	533	.....	.....	533	5.81	.....	12,361	.....	4.31
17	730	[c] 3	.03	727	7.98	11,600	11,202	.02	6.48
18	1,089	49	.53	1,040	11.35	12,297	12,593	.39	8.25
19	1,141	187	2.04	954	10.41	11,347	10,601	1.64	8.99
20	1,296	388	4.23	908	9.91	12,186	12,266	3.19	7.40
21 to 25	5,988	3,460	37.77	2,528	27.54	46,711	42,290	7.40	5.96
25 to 30	3,828	2,699	29.46	1,129	12.32	51,611	47,659	5.22	2.36
30 to 35	1,380	931	10.16	449	4.90	42,180	39,261	2.20	1.14
35 to 40	780	500	5.45	280	3.05	39,079	34,473	1.27	.81
40 to 45	425	273	2.98	152	1.65	32,114	27,910	.85	.54
45 to 50	293	189	2.06	104	1.13	27,738	21,928	.68	.47
50 to 55	234	161	1.75	73	.79	23,787	17,975	.67	.40
55 to 60	128	101	1.10	27	.29	16,273	12,469	.62	.21
60 to 65	89	68	.74	21	.22	12,948	10,512	.52	.19
65 to 70	50	40	.43	10	.10	8,266	6,584	.48	.15
70 to 75	20	20	.21	.....	.....	5,398	4,185	.37	.....
75 to 80	10	8	.08	1	.01	2,575	2,139	.31	.04
80 and over	2	2	.02	1	.01	1,701	1,523	.11	.06
Unknown ages	193	81	.88	112	1.22	209	149	38.75	75.16

[a] Population at ages at which marriages occurred, except of counties from which no returns of marriages in 1870 were received.
[b] At which marriages occurred.
[c] Not of legal age.

TABLE VIII.

Exhibiting, for the State and Counties, by Sex, the Nativity, and Age in Periods of Years, of Persons Married in Michigan during the Year ending December 31st, 1870.

State and Counties.	No. of Couples.	Nativity.					Sex Stated.	Ages in Periods of Years.														
		Native.	Foreign.	Foreign Males.	Foreign Females.	Unknown.		Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 and over.	Unknown.
							Totals	3,609	7,279	3,828	1,380	780	425	293	234	128	89	50	20	9	3	193
State	9,160	5,554	1,621	1,036	637	312	Males	239	3,848	2,699	931	500	273	189	161	101	68	40	20	8	2	81
							Females	3,370	3,431	1,129	449	280	152	104	73	27	21	10	....	1	1	112
Alcona	8	3	3	.....	2	....	Males	.....	4	2	.....	1	....	....	1	....	....	....	....	....	....	....
							Females	4	2	.....	.....	1	....	....	1	....	....	....	....	....	....	....
Allegan	277	181	36	33	16	11	Males	8	116	75	32	11	15	8	6	1	2	1	....	....	....	2
							Females	121	98	25	14	5	3	4	4	1	....	....	....	....	....	2
Alpena	6	1	3	.....	2	....	Males	.....	2	1	3	....	....	....	....	....	....	....	....	....	....	....
							Females	3	2	.....	1	....	....	....	....	....	....	....	....	....	....	....
Antrim	16	8	2	3	3	....	Males	.....	9	4	1	2	....	....	....	....	....	....	....	....	....	....
							Females	8	7	1	.....	....	....	....	....	....	....	....	....	....	....	....
Barry	169	137	8	16	6	2	Males	6	81	37	18	10	5	6	3	1	....	1	....	....	....	1
							Females	72	55	23	9	1	4	2	1	....	....	....	....	....	....	2
Bay	125	46	47	10	17	5	Males	1	38	48	16	11	2	3	1	2	....	....	....	....	....	3
							Females	36	58	16	10	3	2	2	....	....	....	....	....	....	....	3

TABLE VIII.—Continued.

Counties.	No. of Couples.	Nativity.					Sex Stated.	Ages in Periods of Years.														
		Native.	Foreign.	Foreign Males.	Foreign Females.	Unknown.		Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 and over.	Unknown.
Benzie	18	10	1	2	3	2	Males	----	7	6	1	2	----	----	----	----	----	----	----	----	----	2
							Females	8	7	----	----	1	----	----	----	----	----	----	----	----	----	2
Berrien	288	218	30	24	13	3	Males	10	188	82	15	20	3	7	5	4	1	2	----	----	----	1
							Females	117	114	25	14	7	5	3	1	----	1	----	----	----	----	1
Branch	265	242	7	10	4	2	Males	12	129	65	24	9	13	1	5	1	3	2	1	----	----	----
							Females	99	108	25	18	5	8	1	1	1	2	----	----	----	----	2
Calhoun	280	213	23	24	10	10	Males	2	109	90	39	15	2	9	5	2	3	2	1	----	----	1
							Females	94	115	81	10	12	4	9	3	----	----	1	----	----	----	1
Cass	188	162	6	14	3	3	Males	3	91	52	13	12	1	4	5	1	3	1	2	----	----	----
							Females	78	68	22	4	6	3	2	1	1	3	----	----	----	----	----
Charlevoix	18	8	2	5	3	----	Males	----	5	9	3	----	1	----	----	----	----	----	----	----	----	----
							Females	12	2	2	2	----	----	----	----	----	----	----	----	----	----	----
Cheboygan	14	3	7	4	----	----	Males	----	7	4	2	----	----	----	----	----	1	----	----	----	----	----
							Females	9	2	2	----	----	----	1	----	----	----	----	----	----	----	----
Chippewa	13	2	4	3	4	----	Males	----	4	5	1	1	----	----	----	----	----	----	----	----	----	2
							Females	5	5	----	1	----	----	----	----	----	----	----	----	----	----	2
Clinton	177	128	12	20	10	7	Males	2	80	49	24	5	2	7	3	3	----	1	1	----	----	----
							Females	80	60	17	3	10	4	----	2	----	----	----	----	----	----	1
Delta	21	3	14	4	----	----	Males	----	7	8	5	----	----	----	----	1	----	----	----	----	----	----
							Females	7	10	2	1	----	----	----	1	----	----	----	----	----	----	----

Eaton	211	180	4	11	7	9	Males	9	86	58	18	14	10	4	8	3	5	----	----	----	----	1
							Females	68	84	23	18	5	8	4	1	3	----	1	----	----	----	1
Emmet	11	8	------	2	1	----	Males	2	5	------	------	----	----	1	----	1	----	----	1	----	----	1
							Females	7	1	------	------	----	----	1	1	----	----	----	----	----	----	1
Genesee	306	214	15	33	34	10	Males	7	137	91	27	19	7	4	4	5	1	2	1	----	----	1
							Females	103	134	33	11	10	6	1	2	1	1	1	----	----	----	3
Grand Traverse	20	13	1	5	1	----	Males	1	7	6	2	2	1	----	----	----	----	----	----	----	----	1
							Females	13	------	2	2	2	----	----	----	----	----	----	----	----	---	1
Gratiot	74	56	2	4	4	8	Males	4	33	23	8	1	1	1	----	1	1	----	----	----	----	1
							Females	36	27	3	5	1	----	----	----	1	----	----	----	----	----	1
Hillsdale	320	280	6	14	11	9	Males	8	165	74	23	15	14	1	3	7	4	5	1	----	----	----
							Females	129	115	29	16	8	8	5	6	1	3	----	----	----	----	----
Huron	72	9	47	13	3	----	Males	3	18	31	2	6	4	1	2	2	3	----	----	----	----	----
							Females	41	13	8	2	1	3	1	1	----	2	----	----	----	----	----
Ingham	208	168	2	14	10	14	Males	10	83	54	19	10	12	7	4	1	2	1	----	----	----	5
							Females	98	66	15	11	9	5	1	2	1	----	----	----	----	----	5
Ionia	211	128	13	19	18	33	Males	3	100	47	28	10	9	3	6	4	1	----	----	----	----	----
							Females	80	73	32	12	6	5	----	2	----	----	----	----	----	----	1
Iosco	28	8	7	5	7	1	Males	2	14	5	3	1	----	3	----	----	----	----	----	----	----	----
							Females	13	11	2	------	2	----	----	----	----	----	----	----	----	----	----
Isabella	37	32	------	2	2	1	Males	1	9	6	2	2	1	----	1	----	1	----	1	----	----	13
							Females	11	4	4	------	2	----	1	2	----	----	----	----	----	----	13
Jackson	214	157	16	17	16	8	Males	4	95	61	21	11	3	2	4	3	2	2	----	1	----	5
							Females	74	79	33	8	6	6	1	----	----	----	----	----	----	----	7
Kalamazoo	330	208	49	31	16	26	Males	8	130	90	37	24	18	6	7	5	2	2	1	1	1	3
							Females	101	130	37	21	18	7	7	5	1	----	----	----	----	1	2
Kent	399	250	71	43	24	11	Males	8	168	112	39	32	11	17	8	1	2	3	----	----	----	3
							Females	133	149	54	20	23	7	6	3	----	----	----	----	----	----	4
Lapeer	184	92	30	28	29	5	Males	12	88	44	15	8	7	3	3	1	1	----	1	----	----	1
							Females	73	64	21	13	3	1	1	1	----	----	1	----	----	----	6

TABLE VIII.—CONTINUED.

COUNTIES.	No. of Couples.	Nativity.					Sex Stated.	Ages in Periods of Years.														
		Native.	Foreign.	Foreign Males.	Foreign Females.	Unknown.		Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 and over.	Unknown.
Leelanaw	29	16	7	4	2	----	Males	1	13	6	5	----	1	----	1	1	----	----	----	----	----	1
							Females	15	5	6	1	----	----	----	1	----	----	----	----	----	----	1
Lenawee	398	298	20	36	16	28	Males	8	164	118	34	21	15	9	14	2	3	2	4	1	----	3
							Females	148	136	54	17	17	7	6	2	----	1	1	----	1	----	3
Livingston	108	80	5	13	6	4	Males	3	46	39	8	3	3	2	----	1	2	----	----	----	----	1
							Females	41	42	14	6	----	1	2	----	1	----	----	----	----	----	1
Mackinac	16	9	2	3	1	1	Males	2	7	4	1	1	1	----	----	----	----	----	----	----	----	----
							Females	4	10	------	1	----	----	1	----	----	----	----	----	----	----	----
Macomb	206	107	58	26	20	----	Males	7	98	84	25	15	6	1	1	----	----	2	----	1	----	1
							Females	70	91	28	9	6	5	----	1	----	----	1	----	----	----	----
Manistee	81	19	50	5	3	4	Males	1	30	32	7	6	3	1	1	----	----	----	----	----	----	----
							Females	26	32	14	2	3	2	----	----	1	----	----	----	----	----	1
Marquette	145	48	70	14	11	2	Males	1	59	43	29	7	2	1	----	----	----	----	----	----	----	3
							Females	45	68	17	10	1	1	----	----	----	----	----	----	----	----	3
Mason	25	14	6	2	----	3	Males	1	12	8	1	1	1	1	----	----	----	----	----	----	----	----
							Females	18	5	5	1	1	----	----	----	----	----	----	----	----	----	----
Mecosta	56	33	4	10	8	1	Males	2	23	11	5	3	2	3	4	----	2	1	----	----	----	----
							Females	32	10	3	2	2	2	----	3	1	1	----	----	----	----	----
Menominee	4	1	------	1	1	1	Males	------	------	2	2	----	----	----	----	----	----	----	----	----	----	----
							Females	2	1	------	1	----	----	----	----	----	----	----	----	----	----	----

Midland	29	15	4	4	5	1	Males	2	14	8	1	1	2	----	1	----	----	----	----	----	----	----
							Females	14	12	------	3	----	----	----	----	----	----	----	----	----	----	----
Missaukee	1	------	------	------	----	1	Males	------	------	1	------	----	----	----	----	----	----	----	----	----	----	----
							Females	------	1	------	------	----	----	----	----	----	----	----	----	----	----	----
Monroe	204	137	26	20	8	18	Males	7	76	80	10	9	4	6	4	4	2	----	----	1	----	1
							Females	73	79	23	9	6	4	4	3	1	1	----	----	----	----	1
Montcalm	90	70	9	4	6	1	Males	3	46	20	9	3	2	3	2	2	----	----	----	----	----	----
							Females	44	27	10	4	4	1	----	----	----	----	----	----	----	----	----
Muskegon	101	47	30	15	5	4	Males	3	41	34	12	4	1	----	2	2	1	----	----	----	----	1
							Females	47	34	14	2	2	1	1	1	----	----	----	----	----	----	2
Newaygo	47	32	2	8	5	----	Males	2	18	10	9	1	2	4	----	----	1	----	----	----	----	----
							Females	21	18	6	2	2	2	----	1	----	----	----	----	----	----	----
Oakland	311	211	18	42	24	16	Males	5	120	97	32	17	5	6	10	6	4	1	1	----	----	7
							Females	90	122	54	14	11	3	5	2	----	----	1	----	----	----	9
Oceana	54	34	6	7	6	1	Males	4	21	14	9	5	1	----	----	----	----	----	----	----	----	----
							Females	33	12	2	6	1	----	----	----	----	----	----	----	----	----	----
Ontonagon	9	3	6	------	----	----	Males	------	3	2	3	1	----	----	----	----	----	----	----	----	----	----
							Females	5	3	1	------	----	----	----	----	----	----	----	----	----	----	----
Osceola	14	10	------	2	2	----	Males	1	6	4	3	----	----	----	----	----	----	----	----	----	----	----
							Females	7	6	------	1	----	----	----	----	----	----	----	----	----	----	----
Ottawa	180	70	69	29	11	1	Males	8	50	61	25	9	7	4	5	5	3	2	----	----	----	1
							Females	63	48	33	12	8	4	6	----	3	----	2	----	----	----	1
Saginaw	309	92	123	54	35	5	Males	2	132	118	31	10	4	6	4	1	----	----	----	----	----	1
							Females	113	131	40	8	3	6	4	----	----	----	1	----	----	----	3
Sanilac	91	9	46	22	13	1	Males	2	41	31	9	4	1	1	2	----	----	----	----	----	----	----
							Females	34	40	11	2	3	1	----	----	----	----	----	----	----	----	----
Schoolcraft	2	------	2	------	----	----	Males	------	------	------	------	----	----	----	----	----	----	----	----	----	----	2
							Females	------	------	------	------	----	----	----	----	----	----	----	----	----	----	2
Shiawassee	114	83	9	12	5	5	Males	2	46	35	10	5	4	2	1	3	1	1	1	1	----	2
							Females	43	39	13	5	4	1	----	5	1	1	----	----	----	----	2

TABLE VIII.—CONTINUED.

Counties.	No. of Couples.	Nativity.					Sex Stated.	Ages in Periods of Years.														
		Native.	Foreign.	Foreign Males.	Foreign Females.	Unknown.		Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 and over.	Unknown.
St. Clair	285	68	182	49	33	8	Males	11	129	64	30	13	18	8	6	3	2	----	1	----	----	----
							Females	107	98	41	17	7	8	3	1	2	----	----	----	----	----	1
St. Joseph	231	218	4	7	7	----	Males	10	116	57	20	11	6	3	4	2	2	----	----	----	----	----
							Females	88	92	29	7	6	2	6	----	----	1	----	----	----	----	----
Tuscola	97	47	17	16	14	3	Males	3	46	24	13	2	1	5	----	1	----	----	----	----	----	2
							Females	49	27	9	7	2	----	----	1	----	----	----	----	----	----	2
Van Buren	208	167	8	20	7	6	Males	4	90	60	18	13	6	3	4	5	2	2	----	----	----	1
							Females	96	66	17	6	7	2	5	4	3	1	----	----	----	----	1
Washtenaw	288	160	57	41	23	7	Males	6	105	95	34	16	12	7	2	6	1	----	----	----	1	3
							Females	65	124	58	13	9	3	2	2	1	1	----	----	----	----	10
Wayne	919	298	370	156	81	14	Males	12	340	332	93	64	26	15	14	7	4	4	2	2	----	4
							Females	252	400	145	59	28	12	6	5	2	2	----	----	----	----	8
Wexford	5	4	------	------	----	1	Males	------	1	1	2	1	----	----	----	----	----	----	----	----	----	----
							Females	2	2	------	1	----	----	----	----	----	----	----	----	----	----	----

[NOTE.—In Tables III. and XII. of marriages, all the counties appear; those from which no returns were received being designated by reference marks and foot-notes. In the other tables,—V., VIII., IX., and XI.,—only those counties appear from which returns of marriages in 1870 were received; and in Table XI. only those counties are printed in which marriages occurred between persons with unusual disparity in age.]

TABLE IX.

Exhibiting, for the State and counties, the Total Number, and Number of Each Sex, under 21 Years of Age, and Also the Number of Each Sex at Each Age under that of Twenty-one Years, Married in Michigan during the Year ending December 31st, 1870.

STATE AND COUNTIES.	Total No. Married Under 21 Years of Age.	Total No. of Males Married Under 21 Years of Age.	Total No. Females Married Under 21 Years of Age.	Ages, Males.				Ages of Females.							
				Twenty.	Nineteen.	Eighteen.	Seventeen.	Twenty.	Nineteen.	Eighteen.	Seventeen.	Sixteen.	Fifteen.	Fourteen.	Thirteen.
State	4,905	627	4,278	388	187	49	3	908	954	1.040	727	523	92	21	3
Alcona	6	.....	6	....	....	..	..	2	....	1	3	....	..	..	..
Allegan	170	18	152	10	7	1	..	31	32	31	32	25	1	..	..
Alpena	4	.....	4	....	....	..	..	1	....	3	....	....	..	..	..
Antrim	11	.....	11	....	....	..	..	3	4	2	1	1	..	..	..
Barry	100	13	87	7	5	1	..	15	17	20	21	13	1	..	..
Bay	57	4	53	3	1	..	..	17	14	6	9	7	..	..	..
Benzie	11	1	10	1	....	..	..	2	....	4	2	2	..	..	..
Berrien	169	24	147	14	6	3	1	28	23	37	31	16	8	2	..
Branch	164	31	133	19	9	3	..	34	33	27	16	19	2	2	..
Calhoun	133	13	120	11	1	1	..	26	33	32	19	6	2	1	1
Cass	115	14	101	11	2	1	..	23	18	30	19	8	3	..	..
Charlevoix	13	.....	13	....	....	..	..	1	2	3	....	3	4	..	..
Cheboygan	11	.....	11	....	....	..	..	2	1	5	1	1	1	..	..
Chippewa	8	.....	8	....	....	..	..	3	1	1	....	2	1	..	..
Clinton	109	11	98	9	2	..	..	18	21	24	18	13	2	2	..
Delta	9	.....	9	....	....	..	..	2	....	2	2	2	..	1	..
Eaton	114	21	93	12	7	2	..	25	13	19	17	16	3	..	..
Emmet	11	3	8	1	2	..	..	1	1	.....	3	2	1	..	..
Genesee	169	23	146	16	7	..	..	43	30	28	26	15	3	1	..
Gr'd Traverse	17	4	13	3	1	..	..	....	2	4	3	3	..	1	..
Gratiot	53	8	46	4	1	2	1	9	11	11	5	8	1	..	..
Hillsdale	185	29	156	21	5	3	..	27	44	39	27	15	4	..	..

TABLE IX.—Continued.

COUNTIES.	Total No. Married Under 21 Years of Age.	Total No. of Males Married Under 21 Years of Age.	Total No. Females Married Under 21 Years of Age.	Ages, Males.				Ages of Females.							
				Twenty.	Nineteen.	Eighteen.	Seventeen.	Twenty.	Nineteen.	Eighteen.	Seventeen.	Sixteen.	Fifteen.	Fourteen.	Thirteen.
Huron	49	5	44	2	2	1	--	3	4	17	11	8	--	1	--
Ingham	125	16	109	6	8	2	--	16	22	29	24	14	3	1	--
Ionia	115	13	102	10	3	--	--	22	22	25	16	14	3	--	--
Iosco	21	4	17	2	1	1	--	4	4	6	1	2	--	--	--
Isabella	15	2	13	1	1	--	--	2	1	3	2	4	1	--	--
Jackson	111	16	95	12	4	--	--	21	15	20	23	13	3	--	--
Kalamazoo	150	16	134	8	6	2	--	33	37	27	19	15	3	--	--
Kent	191	20	171	12	6	2	--	38	31	44	35	20	2	1	--
Lapeer	109	23	86	11	9	3	--	13	22	18	18	14	--	1	--
Leelanaw	21	4	17	3	----	1	--	2	1	6	3	2	2	1	--
Lenawee	206	24	182	16	7	1	--	34	38	50	32	25	3	--	--
Livingston	59	6	53	3	2	1	--	12	12	14	9	5	1	--	--
Mackinac	10	2	8	----	1	1	--	4	1	2	1	----	--	--	--
Macomb	108	20	88	13	7	--	--	18	22	17	16	14	--	1	--
Manistee	31	1	30	----	1	--	--	4	5	9	6	4	1	1	--
Marquette	62	3	59	2	----	1	--	14	8	15	8	10	4	--	--
Mason	19	3	16	2	1	--	--	3	----	3	2	6	1	--	1
Mecosta	35	2	33	----	2	--	--	1	6	8	8	10	--	--	--
Menominee	2	------	2	----	----	--	--	----	1	------	1	----	--	--	--
Midland	24	5	19	3	2	--	--	5	2	4	2	4	2	--	--
Monroe	105	15	90	8	7	--	--	17	28	26	11	7	1	--	--
Montcalm	65	9	56	6	2	1	--	12	6	11	6	19	2	--	--
Muskegon	60	9	51	6	3	--	--	4	13	12	12	9	1	--	--
Newaygo	34	7	27	5	2	--	--	6	5	3	7	5	1	--	--
Oakland	134	13	121	8	4	1	--	31	39	36	6	7	2	--	--
Oceana	38	5	33	1	3	--	1	----	9	8	5	8	3	--	--
Ontonagon	6	1	5	1	----	--	--	----	3	2	----	----	--	--	--
Osceola	10	2	8	1	1	--	--	1	----	1	2	4	--	--	--
Ottawa	92	16	76	8	5	3	--	13	19	20	12	11	--	1	-
Saginaw	165	17	148	15	----	2	--	35	31	30	26	23	3	--	--

TABLE IX.—CONTINUED.

COUNTIES.	Total No. Married Under 21 Years of Age.	Total No. of Males Married Under 21 Years of Age.	Total No. Females Married Under 21 Years of Age.	Ages, Males.				Ages of Females..							
				Twenty.	Nineteen.	Eighteen	Seventeen.	Twenty.	Nineteen.	Eighteen.	Seventeen.	Sixteen.	Fifteen.	Fourteen.	Thirteen.
Sanilac.	51	7	44	5	2	..	..	10	11	9	6	7	1	..	..
Shiawassee....	58	4	54	2	2	..	..	11	12	11	14	4	1	1	..
St. Clair.....	162	27	135	16	10	1	..	28	39	30	26	10	2	..	..
St. Joseph....	137	21	116	11	8	2	..	28	27	29	16	14	1	1	..
Tuscola.....	66	7	59	4	3	..	..	10	8	28	10	8	..	..	..
Van Buren....	134	17	117	13	1	3	..	21	25	26	26	15	3	..	1
Washtenaw...	105	13	92	7	4	2	..	27	24	31	5	5	..	..	..
Wayne	379	35	344	23	11	1	..	92	100	86	45	15	5	1	..
Wexford.....	2	.....	2	....	....	..	..	....	1	.....	....	1	..	..	..

The following sections of Chapter CVII., Compiled Laws of 1857, are quoted in this connection in place of any remarks concerning the last column of males, and the three last columns of females, in Table IX.; and for the purpose of calling more general attention to certain provisions of law in this State bearing upon the age of parties married:

Section 3204. Who shall be capable of contracting marriage.

Section 3205. Marriage is a civil contract.

* * * * * * * * * *

Section 3217. Forfeiture for joining persons in marriage contrary to law.

* * * * * * * * * *

Chapter Eighty-three of Revised Statutes of 1846:

(3204.) Section 1. Every male who shall have attained the full age of eighteen years, and every female who shall have attained the full age of sixteen years, shall be capable in law of contracting marriage, if otherwise competent.

(3205.) Section 2. Marriage, so far as its validity in law is

concerned, is a civil contract, to which the consent of parties capable in law of contracting is essential.

* * * * * * * * * *

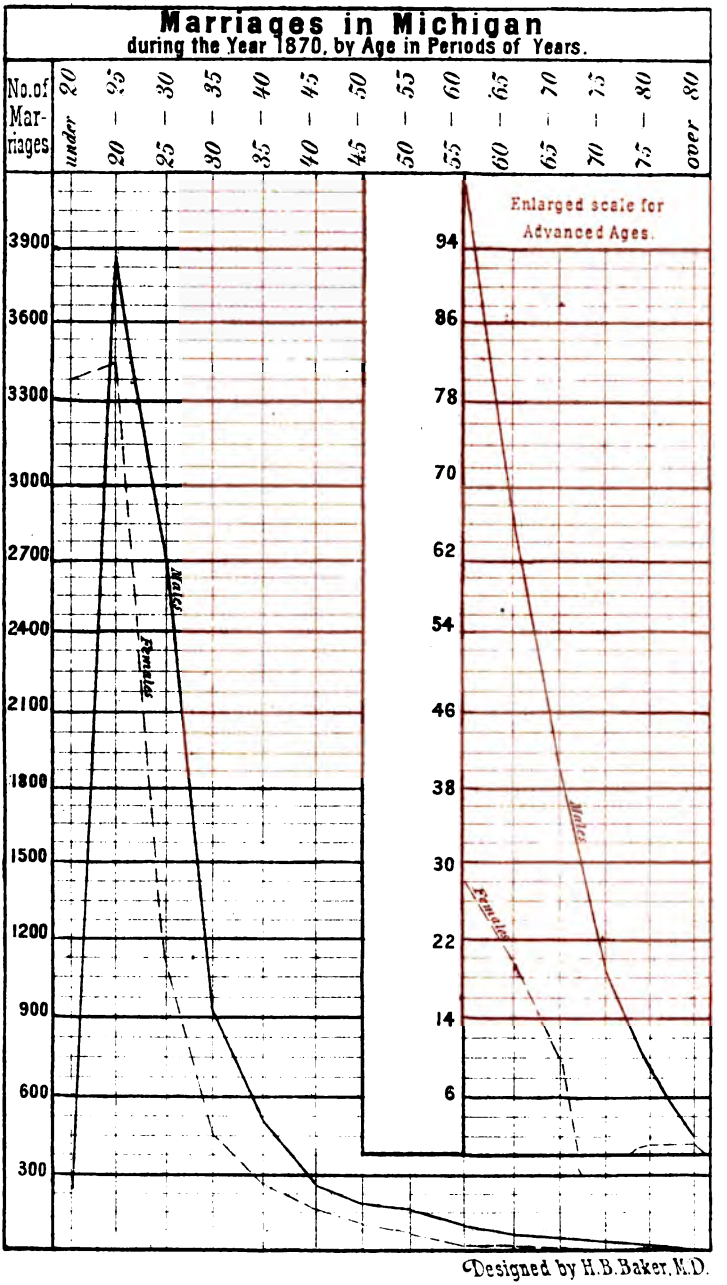
(3217.) Section 14. If any justice of the peace or minister of the gospel shall join any person in marriage contrary to the provisions of this chapter, he shall forfeit for every such offense a sum not exceeding five hundred dollars.

TABLE X.

Showing the Number of each Sex, at each Period of Age, who were Married in Michigan during the Year 1870; and the Number of each Sex, at each Period of Age, who were United to the Opposite Sex, at each period of Age.

AGES OF MALES.	Ages of Females.															Total Males.
	Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 and Over.	Unknown.	
Under 20	199	32	5	1	----	----	----	--	--	--	--	--	--	--	----	237
20 to 25	2,013	1,588	190	31	8	----	----	1	--	--	--	--	--	--	20	3,851
25 to 30	870	1,238	471	79	24	4	3	1	--	--	--	--	--	--	8	2,698
30 to 35	194	372	196	127	32	6	3	1	--	--	--	--	--	--	3	934
35 to 40	59	122	150	80	64	17	4	1	--	--	--	--	--	--	2	499
40 to 45	21	43	70	49	42	30	13	2	1	--	--	--	--	--	2	273
45 to 50	5	19	27	29	41	37	20	5	2	2	1	--	--	--	----	188
50 to 55	4	10	13	27	34	31	20	12	6	1	2	--	--	--	----	160
55 to 60	3	2	4	16	12	17	20	18	6	--	1	--	--	--	2	101
60 to 65	1	------	1	6	13	4	10	18	9	5	1	--	--	--	----	68
65 to 70	1	------	1	3	6	4	5	7	2	8	3	--	--	--	----	40
70 to 75	------	------	------	1	2	1	5	4	1	3	1	--	1	--	----	19
75 to 80	------	1	------	----	1	1	1	2	--	1	1	--	--	--	1	9
80 and over	------	------	------	----	----	----	----	--	1	--	--	--	--	1	----	2
Unknown	4	1	3	----	----	----	----	--	--	--	--	--	--	--	73	81
Total Females	3,374	3,428	1,181	449	279	152	104	72	28	20	10	--	1	1	111	9,160

DIAGRAM No 4.



Designed by H.B. Baker, M.D.

Table X. shows the number of each sex married in each period of age, and the manner of their union by age, in periods of years. Thus, 237 males aged under 20, married females aged as follows: 199, under 20; 32, 20 to 25; 5, 25 to 30; and 1 aged 30 to 35. Three thousand three hundred and seventy-four females aged under 20, were married to males aged as follows: 199, under 20; 2,013, 20 to 25; 870, 25 to 30; 194, 30 to 35; 59, 35 to 40; 21, 40 to 45; 5, 45 to 50; 4, 50 to 55; 3, 55 to 60; 1, 60 to 65; 1, 65 to 70; and 4, age unknown.

It will be seen that the greatest number of marriages in any one period of age was, for both sexes, in that of twenty to twenty-five; there being 3,851 males, and 3,428 females married at ages within that period.

The greatest number of marriages of one sex in any one period of age, to the greatest number of the opposite sex in any one period of age, was 2,013 females aged under twenty, to males aged twenty to twenty-five.

Some of the details of the most remarkable marriages in the several counties, so far as difference in age is concerned, are given in Table XI.

TABLE XI.

Marriages with great Disparity of Age in Michigan during the Year ending December 31st, 1870.

COUNTIES.	Occupation of Bridegroom.	Age of Bridegroom.	Age of Bride.	Occupation of Bridegroom.	Age of Bridegroom.	Age of Bride.
Allegan	Farmer	54	19	Unknown	45	50
Alpena	Boatman	36	18		----	----
Antrim	Farmer	31	17		----	----
Barry	Physician	46	21	Farmer	28	42
Bay	Farmer	57	28	Carpenter	36	44
Benzie	Mason	37	16		----	----
Berrien	Farmer	59	15		----	----
Branch	Farmer	65	30	Farmer	20	35
Calhoun	Physician	92	37	Farmer	26	46
Cass	Insurance Agent.	47	18	Cooper	28	51
Cheboygan	Sawyer	30	15		----	----
Chippewa	Laborer	35	19		----	----
Clinton	Laborer	56	16		----	----
Delta	Farmer	24	14		----	----
Eaton	Farmer	36	16		----	----
Emmet	Farmer	70	50		----	----
Genesee	Farmer	67	37		----	----
Grand Traverse		----	----	Machinist	19	28
Gratiot	Sawyer	40	17		----	----
Hillsdale	Lawyer	57	25	Farmer	37	54
Huron	Merchant's Clerk	40	18		----	----
Ingham	Farmer	67	34		----	----
Ionia	Minister	68	34		----	----
Iosco	Carpenter	49	22		----	----
Isabella	Physician	71	49		----	----
Jackson	Farmer	67	18		----	----
Kalamazoo	Farmer Farmer	75 83	38 80	Laborer	32	46

TABLE XI.—CONTINUED.

COUNTIES.	OCCUPATION OF BRIDEGROOM.	Age of Bridegroom.	Age of Bride.	OCCUPATION OF BRIDEGROOM.	Age of Bridegroom.	Age of Bride.
Kent	Sawyer	52	22			
Lapeer	Farmer	72	38			
Leelanaw	Farmer	53	28			
Lenawee	Farmer	40	16			
Livingston	Carpenter	60	26	Farmer	19	26
Mackinac	Fisherman	36	22	Soldier	32	45
Macomb	Farmer	67	35			
Manistee	Farmer	27	14	Laborer	24	35
Marquette	Laborer	35	18			
Mason	Mason	22	13	Farmer	19	30
Mecosta	Farmer	50	19			
Menominee	Brewer	29	17			
Midland	Farmer	50	20			
Monroe	Farmer	52	19			
Montcalm	Laborer	58	16			
Muskegon	Carpenter	54	29			
Newaygo	Farmer	41	17			
Oakland	Farmer	70	30			
Oceana	Lumberman	35	19			
Ottawa	Farmer	59	20			
Saginaw	Laborer	47	19	Laborer	45	65
Sanilac	Farmer	54	24			
Shiawassee	Farmer	76	50	Farmer	23	54
St. Clair	Farmer Laborer	60 48	17 18			
Tuscola	Speculator	45	23			
Van Buren	Farmer	52	34			
Washtenaw	Farmer	80	55	Merchant Laborer	33 47	50 60
Wayne	Farmer Farmer Real Est. Owner	75 54 68	24 20 34			

TABLE XII.

Exhibiting, for the State and Counties, the Number of Marriages in Michigan during the years 1868, 1869, and 1870, as first Returned to the State Department; the Number Solemnized during the years 1868 and 1869 Returned since the Publication of the Annual Reports; the Population June 1st, 1870; Number of Inhabitants to one Marriage in 1870; and the Per Cent of Marriages in 1870 to Population.

STATE AND COUNTIES.	MARRIAGES.							Population June 1st, 1870.[a]	No. of Inhabitants to one Marriage in 1870.	Per Cent of Marriages in 1870 to Population.
	1868.			1869.			1870.			
	No. as first Returned and Publishd in Reports.	No. Returned since Reports were Published.	No. Returned Previous to November 1st, 1871.	No. as first Returned and Published in Report.	No. Returned since Report was Published.	No. Returned Previous to November 1st, 1871.	No. Returned.			
State	6,862	1,748	8,605	8,459	1,729	10,188	9,160	1,168,610	127	.78
Alcona	------	------	------	5	2	7	8	766	95	1.04
Allegan	167	72	239	260	------	260	277	32,105	115	.86
Alpena	24	------	24	42	------	42	6	2,756	459	[c].21
Antrim	15	------	15	14	------	14	16	1,985	124	.80
Barry	130	18	148	140	27	167	169	22,200	131	.76
Bay	113	------	113	86	------	86	125	15,900	127	.78
Benzie	------	------	------	12	------	12	18	2,184	121	.82
Berrien	325	123	448	314	67	381	288	35,104	121	.82
Branch	209	55	264	235	40	275	265	26,227	98	1.01
Calhoun	217	63	280	164	114	278	280	36,571	130	.76
Cass	170	58	228	149	32	181	188	21,096	112	.89
Charlevoix	------	------	------	6	------	6	18	1,724	95	1.04
Cheboygan	9	------	9	15	------	15	14	2,197	156	.63

[a] Of counties from which returns of marriages in 1870 were received.
[c] Not all returned. County clerk says records were burned in court-house in Dec., 1870.

TABLE XII.—CONTINUED.

COUNTIES.	MARRIAGES. 1868. No. as first Returned and Published in Reports.	1868. No. Returned since Reports were Published.	1868. No. Returned Previous to November 1st, 1871.	1869. No. as first Returned and Published in Report.	1869. No. Returned since Report was Published.	1869. No. Returned Previous to November 1st, 1871.	1870. No. Returned.	Population June 1st, 1870.[a]	No. of Inhabitants to one Marriage in 1870.	Per Cent of Marriages in 1870 to Population.
Chippewa	------	------	------	------	13	13	13	1,690	130	.76
Clare [b]	------	------	------	------	------	------	------	------	----	----
Clinton	187	4	191	156	62	218	177	22,851	129	.77
Delta	5	10	15	------	6	6	21	2,441	116	.86
Eaton	113	48	161	143	55	198	211	25,163	119	.83
Emmet	15	------	15	12	1	13	11	1,211	110	.90
Genesee	182	94	276	248	83	331	306	33,895	110	.90
Grand Traverse	52	------	52	31	5	36	20	4,443	222	.45
Gratiot	85	------	85	90	------	90	74	11,808	159	.62
Hillsdale	210	67	277	223	105	328	320	31,688	99	1.00
Houghton	62	------	62	63	------	63	------	------	----	----
Huron	47	------	47	67	------	67	72	9,048	125	.79
Ingham	104	13	117	168	52	220	208	25,268	121	.82
Ionia	184	40	224	206	34	240	211	27,675	131	.75
Iosco	13	------	13	14	------	14	28	3,175	113	.88
Isabella	40	9	49	32	------	32	37	4,113	111	.89
Jackson	171	98	269	236	103	339	214	36,040	168	.59
Kalamazoo	210	89	299	231	103	334	330	32,065	97	1.02
Kalkaska [b]	------	------	------	------	------	------	------	------	----	----
Kent	399	------	399	505	10	515	399	50,410	126	.79
Lake [b]	------	------	------	------	------	------	------	------	----	----
Lapeer	106	34	140	139	34	173	184	21,342	115	.86
Leelanaw	45	1	46	42	1	43	29	4,577	157	.63
Lenawee	237	187	424	325	149	474	393	45,601	116	.86

[a] Of counties from which returns of marriages in 1870 were received.
[b] Counties organized by Legislature of 1871.

TABLE XII.—CONTINUED.

COUNTIES.	MARRIAGES.							Population June 1st, 1870.[a]	No. of Inhabitants to one Marriage in 1870.	Per Cent of Marriages in 1870 to Population.
	1868.			1869.			1870.			
	No. as first Returned and Published in Reports.	No. Returned since Reports were Published.	No. Returned Previous to November 1st, 1871.	No. as first Returned and Published in Report.	No. Returned since Report was Published.	No. Returned Previous to November 1st, 1871.	No. Returned.			
Livingston	116	26	142	119	22	141	108	19,885	179	.55
Mackinac	------	------	------	------	------	------	16	1,715	107	.98
Macomb	185	50	185	161	52	213	206	27,619	134	.74
Manistee	27	1	28	68	15	83	81	6,074	74	1.33
Marquette	45	------	45	75	6	81	145	14,278	98	1.01
Mason	21	2	23	27	------	27	25	3,266	130	.76
Mecosta	52	5	57	74	8	82	56	5,645	100	.99
Menominee	13	------	13	11	------	11	4	1,895	473	.21
Midland	24	4	28	27	------	27	29	3,283	113	.88
Missaukee[b]	------	------	------	------	------	------	1	130	130	.76
Monroe	122	24	146	213	11	224	204	27,475	134	.74
Montcalm	70	10	80	88	8	96	90	13,641	151	.65
Muskegon	70	1	71	158	------	158	101	14,892	147	.67
Newaygo	51	3	54	58	5	58	47	7,292	155	.64
Oakland	153	54	207	330	2	332	311	40,906	131	.76
Oceana	77	4	81	64	15	79	54	7,222	133	.74
Ontonagon	7	2	9	15	------	15	9	2,846	316	.31
Osceola	------	------	------	15	------	15	14	2,104	150	.66
Ottawa	183	24	207	177	38	215	180	26,650	148	.67
Presque Isle[b]	------	------	------	------	------	------	------	----------	----	----
Saginaw	152	------	152	182	6	188	309	39,098	126	.79
Sanilac	77	15	92	91	16	107	91	14,565	160	.62
Schoolcraft[b]	------	------	------	------	------	------	2	799	399	.25
Shiawassee	155	3	158	129	41	170	114	20,822	182	.54

[a] Of counties from which returns of marriages in 1870 were received.
[b] Counties organized by Legislature of 1871,

TABLE XII.—CONTINUED.

COUNTIES.	MARRIAGES.							Population June 1st, 1870.[a]	No. of Inhabitants to one Marriage in 1870.	Per Cent of Marriages in 1870 to Population.
	1868.			1869.			1870.			
	No. as first Returned and Published in Reports.	No. Returned since Reports were Published.	No. Returned Previous to November 1st, 1871.	No. as first Returned and Published in Report.	No. Returned since Report was Published.	No. Returned Previous to November 1st, 1871.	No. Returned.			
St. Clair	229	------	229	264	2	266	285	36,759	128	.77
St. Joseph	214	76	290	289	23	312	231	26,272	113	.87
Tuscola	76	1	77	74	------	74	97	13,715	141	.70
Van Buren	167	60	227	179	54	233	208	28,885	138	.72
Washtenaw	216	71	287	300	63	363	288	41,440	143	.69
Wayne	564	229	793	904	244	1,148	919	119,068	129	.77
Wexford	------	------	------	4	------	4	5	650	130	.76

[a] Of counties from which returns of marriages in 1870 were received.

Efforts are being made to establish a system of exchange of our vital statistics with the various foreign countries, and with the several States of this Union, which publish such statistics. At present, however, there are no foreign statistics in the possession of this State Department, and very few States are represented in its collection of reports. The following Exhibit has been prepared in order to give a view of the marriage-rate as general and extensive as possible. The sources from which some of the statements, and the data for the computations made, have been obtained, are stated in the foot-notes accompanying the exhibit.

Upon what the statements, quoted from the statistics of Minnesota, concerning the various foreign countries, were based, does not appear. They would, of course, be more valuable if the years for which the statements were made had been added. They are given as the most reliable and complete at present accessible to the compiler.

There is believed to have been in this State, and perhaps throughout the United States, an unusually large number of deaths during the year 1870, and a correspondingly small number of marriages.

EXHIBIT D.

Number of Inhabitants to one Marriage, as Stated for Different Foreign Countries, the United States, and Some of the States of the Union.

COUNTRY, STATE, OR CITY.	Year for which the Statement is Made.	Population to one Marriage annually.	
Austria	------	117	Taken from "Statistics of Minnesota for 1869."
Bavaria	------	160	
Belgium	------	122	
Denmark	------	129	
England	------	122	
Finland	------	141	
France	------	122	
Greece	------	174	
Holland	------	129	
Norway	------	124	
Prussia	------	106	
Russia	------	111	
Saxony	------	107	
Spain	------	141	
Sweden	------	135	
United States	1860	122	
New York	1860	135	
Massachusetts	1865	97	
Ohio	------	105	
Minnesota	1860	110	
Minnesota	1868	107	
Minnesota [a]	1870	116	
Massachusetts [b]	1870	98.9	
Michigan [c]	1869	109.9	
Michigan [d]	1870	127.	
New Jersey [e]	1870	135.	
New York City [f]	1869	108.	
New York City [g]	1870	118.	

[a] Taken from "Statistics of Minnesota for 1870."
[b] Computed from data in 29th Reg. Report of Massachusetts.
[c] Marriages corrected up to Nov., 1871. Population estimated from censuses of 1860 and 1870.
[d] As per Table XII. Marriages in some counties not yet returned. See remarks on page 82, and also those preceding this Exhibit.
[e] But there were sixteen townships from which no returns of marriages were received. Computed from data in Reg. Report of New Jersey for 1870.
[f] Computed from data in Report of Met. Board of Health for 1869.
[g] Computed from data in Report of Board of Health of Health Department, for 1870.

DEATHS.

The year 1870 is believed to have been attended with more than an average rate of mortality in this State, and judging from the statements of life insurance companies the same may be said of that portion of the United States throughout which the largest of these companies do business. It may seem derogatory to the several State governments to base opinions concerning such an important thing as the lives of their citizens upon the statements of individuals and corporations, rather than upon official statements of the governments themselves, organized as they are supposed to be, for the protection of the lives and next most important interests of the people. But it is nevertheless true that while many States collect statistics of domestic animals, farm productions, etc., very few of them give sufficient attention to this important subject to enable one to form a correct idea of the condition of the people themselves. In 1860 seven States appear to have had laws requiring the registration of mortality, viz: Vermont, Massachusetts, Connecticut, Rhode Island, New Jersey, North Carolina, and Kentucky. About that time the law in Kentucky was repealed; but in some of the other States similar laws have been enacted. In addition to the States above mentioned, vital statistics are now collected, to some extent, in Ohio, Minnesota, and California; and in Michigan, as will be seen, this is the fourth annual report upon this subject.

Society is coming more and more to understand that the most important function of its political agents, selected to carry out the public policies of the people, should be to pro-

tect the lives of the individuals who collectively constitute the State. These governments having been founded for the better protection of life and liberty, and under them neither life or liberty being any longer threatened by what has been considered man's greatest enemy,—man himself,—it becomes the duty of the government to immediately take action for the better protection of the lives of the people from those hitherto unheeded, and in great part unknown, causes of death which, although less apparent and tangible, have in all times, in peace and in war, caused a greater death-rate than the missiles of any mortal enemy, against which the utmost exertions have always been put forth. And now quite different methods must be adopted. The deadly influences of contagious, infectious, malarious, and many other causes of death, cannot be conquered by cannon or by the sword. And yet grander victories, of greater importance to the people, remain to be achieved, than any which have heretofore resulted from warlike methods. Victories which, instead of being memorable for the number of human beings slain, shall go down as blessings to posterity, as noble victories over hitherto uncontrollable causes of death, and shall be celebrated for the great number of useful lives saved, and the unspeakable happiness conferred by the knowledge and possibility of so great a degree of control over those conditions which render life possible, healthful, and complete. For such success as this, well-organized effort, based upon patient, intelligent research, is essential. To the peaceful hero who shall call forth and so marshal facts, and generalize the scattered forces of knowledge, as to lead to a victory over any one of the prominent causes of death which now annually destroy our citizens by hundreds or by thousands, humanity may well accord a higher praise than to the most successful of warlike generals.

Among the first questions which arise in this connection, one is, What cause or causes produce the greatest proportion of deaths?—for it seems policy to attack the most

important ones first. Another question is, Can the cause or causes be removed?—and if not, can their action be controlled, and deaths therefrom be prevented? The first of these questions is intended to be answered for this State in these statistics. With reference to the last two questions, it must be confessed that no general effort has yet been made by this State, consequently no satisfactory answer based upon our own experience can be returned. Among those who have made this subject a study there is, however, no question but that a large proportion of the deaths now result from removable causes, and that still another large proportion of deaths are entirely unnecessary, and might be prevented by thorough, well-organized effort by the people or by their representatives.

It will be seen, further on, that in this State during the year 1870, consumption was stated to be the cause of more deaths than any other two diseases. In Massachusetts the deaths from consumption have been gradually, although not regularly, decreasing for the past eighteen years; and this result has been attributed to the increased knowledge of it obtained by the—until lately—almost unaided efforts of physicians. Massachusetts has now, since 1870, a State Board of Health, composed of eminent medical men, charged with the supervision of the vital statistics and the interests of human health and life within that Commonwealth. Other States have followed the example, and State Boards of Health have been established in California, Virginia, Louisiana, and Minnesota. This latter State, already noted for its healthful climate, seems determined to render itself still more attractive to settlers by doing its utmost to prevent unnecessary deaths within its borders.

So far as the death-rate in Michigan can be estimated from the statistics thus far collected, it is very low; and the statistics in this State are believed to be as reliable as any collected in any other of the United States in which the system of collec

tion is so new. It must, however, be borne in mind that it is not probable that all the deaths are yet collected. This is mainly due to the fact that a large proportion of the people do not yet realize the importance of the subject, and how closely it is connected with the conditions of their own existence and the lives of those whom they hold most dear. Notwithstanding the superstitious opposition of some, and the apathy of the people as a whole, the death-rate throughout Christendom has been decreased, and the average length of life increased, through the, for the most part, unaided efforts of physicians who, with a philanthropy and benevolence characteristic of the profession, and in apparent opposition to their pecuniary interests, have always labored for the inauguration of sanitary reforms; while the people, with singular dullness respecting this matter of protecting their own lives, have made no effort themselves, and in this State have not made it for the pecuniary interest of even one physician to labor for the prevention of disease, although it is known that in all probability at least a hundred thousand of their number will annually suffer from disease, and that ten thousand annually will die, and notwithstanding candid physicians continually warn them that a large portion of this sickness and many of the deaths might be prevented.

It has been found that one difficulty in the way of collecting a statement of all the deaths under the present law, is the time which elapses before the collection is made. The same remark applies to the collection of births. The more complete discussion of this subject will be found in the introduction to this report. The tables following were compiled from the deaths as they were returned. They must not be taken as the whole truth, but only as the nearest approximations which can be given. These statistics are improving every year, under the present law, and defects in the law may be remedied which will still further improve them. The directions in which the law may be improved are indicated in the letter of transmittal prefacing this report.

The whole number of deaths returned, as having occurred in the State during the year 1870, was 10,766. The average number of deaths during specified periods of time, was as follows:

Average number per quarter	2,691.50
Average number per month	897.17
Average number per week	207.03
Average number per day	29.49

The actual number and per cent of deaths returned, which occurred in each quarter of the year 1870, is shown in Table I., as also the same information concerning the two previous years.

TABLE I.

Deaths in Michigan by Quarters of the Year; Exhibiting the Number, and Per Cent of Total, for the Years 1868, 1869, and 1870.

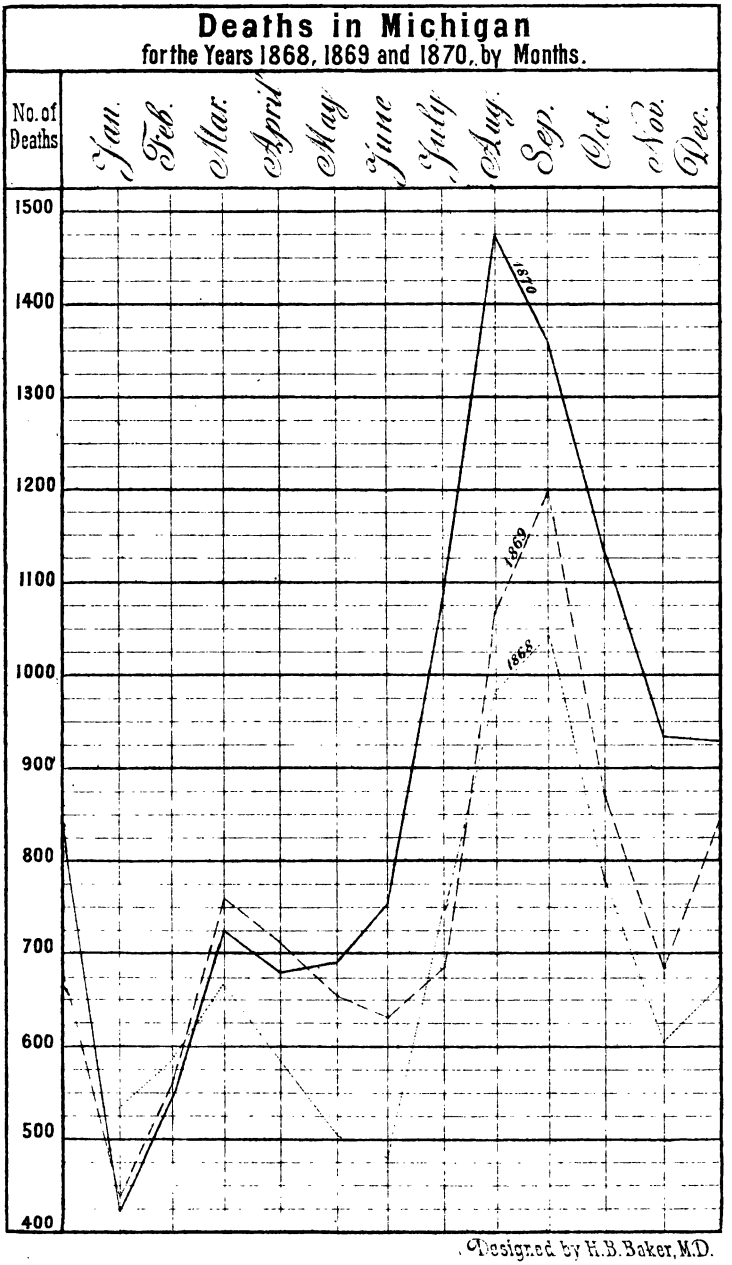
QUARTERS ENDING WITH	1868.		1869.		1870.	
	Number of Deaths.	Per Cent of Total.	Number of Deaths.	Per Cent of Total.	Number of Deaths.	Per Cent of Total.
March	1,789	21.70	1,758	19.22	1,698	15.77
June	[a] 1,568	19.04	1,994	21.80	2,121	19.70
September	2,771	33.64	2,949	32.24	3,920	36.41
December	2,046	24.84	2,396	26.20	2,992	27.79
Unknown	63	.76	48	.52	35	.32
Total	8,235	100.00	9,145	100.00	10,766	100.00
Average	2.058.75	25.00	2,286.25	25.00	2,691.50	25.00

[a] The number of deaths for the month of April, 1868, was increased by one-fifth of the number published in the Second Registration Report, because of first five days not accounted for.

The greatest mortality in each year was during the third quarter, as it usually is in other States of which the statistics

have been examined. For the year 1868 the order of mortality by quarters—beginning with the one having the greatest—was as follows: third, fourth, first, and second. For the year 1869 and 1870, the order was, third, fourth, second, and first. The deaths in the first quarter of 1868 were collected during the following quarter, while since then the deaths in the first quarter of the year have not been collected until the second quarter of the following year. The fact that a smaller proportion of deaths in the first quarter of the year has been collected since the time for which the collection is made has been changed, supports the belief that a certain number of deaths which occur during the first part of the year escape collection because of the great length of time which elapses before the inquiries of the supervisors are made. The order of mortality by quarters in the State of Massachusetts during the years 1866, 1867, and 1870, was the same as here stated for Michigan in 1868. In Massachusetts, during the years 1868 and 1869, the order was, third, first, fourth, and second. It was remarked in the last report that the influence of season appeared to be greater in this State than in other States and cities with which our statistics had been compared. It now seems quite possible that this appearance may result in whole or in part from a different method of collection. The difference between the two quarters in which the least and greatest mortality occurred, was even greater in this State in 1870 than it was in 1869. The excess over the difference in 1869 was doubtless due to the unusual mortality in the third quarter of 1870,—the difference between the quarters was greater in Massachusetts in 1870 than it had been previously,—but the greater difference between the seasons in this State compared with others may be caused by a failure to collect as large a proportion of the deaths in the first quarter, because of the length of time before they are called for; whereas, under the system of registration adopted in Massachusetts the omissions would be likely to be evenly distributed throughout the year.

DIAGRAM No 5.



Designed by H. B. Baker, M.D.

TABLE II.

Deaths in Michigan by Months, Exhibiting the Number and Per Cent of Total, for the Years 1868, 1869, and 1870; the Months arranged in Order by Number of Deaths, the Greatest Number first.

Order.	1868.			1869.			1870.		
	Year and Months.	Number.	Per Cent of Total.	Year and Months.	Number.	Per Cent of Total.	Year and Months.	Number.	Per Cent of Total.
	Year	8,235	100.00	Year	9,145	100.00	Year	10,766	100.00
1	September	1,041	12.51	September	1,194	13.05	August	1,473	13.59
2	August	983	11.93	August	1,068	11.60	September	1,368	12.66
3	October	776	9.42	October	874	9.55	October	1,132	10.51
4	July	747	9.07	December	836	9.14	July	1,084	10.06
5	March	669	8.12	March	761	8.32	November	933	8.66
6	December	668	8.11	April	712	7.78	December	927	8.61
7	November	602	7.31	July	687	7.51	June	754	7.00
8	February	583	7.07	November	686	7.50	March	724	6.73
9	April *	* 583	7.07	May	652	7.13	May	689	6.39
10	January	535	6.49	June	630	6.89	April	678	6.29
11	May	503	6.10	February	561	6.13	February	558	5.13
12	June	482	5.85	January	436	4.77	January	421	3.91
	Unknown	63	.76	Unknown	48	.52	Unknown	35	.32
	Average	686.25	8.33	Average	762.08	8.33	Average	897.16	8.33

* The number of deaths for April, 1868, is increased by one-fifth of the number published in the Second Registration Report, for the reason that the first five days of that month were not included in that Report. The number for the last twenty-five days was 486; 486 ÷ 5=97; 486 + 97=583=estimated number of deaths for April, 1868.

The greatest number of deaths returned as having occurred in any one month during the year 1870 was 1,473 in August. The least number was 421 in January.

As remarked in last report, the increased number of deaths in the months of August and September was not due to any one disease, but resulted from an increased mortality from many, more especially from diseases of the bowels, of the brain, from diseases incident to infancy and old age, and from

debility and consumption. It was evidently to a great extent a selection from among the weakest of the race, and undoubtedly resulted from a general cause. The fact that the proportion of deaths in each year bears a certain fixed relation to the season of the year, appears to indicate that the relation is one of effect and cause,—that the increased proportion of deaths in the months following the extreme heat of summer resulted directly or indirectly from the conditions of climate existing at that time. It is worth noticing in this connection that in 1870 the greatest number of deaths occurred one month earlier than in the years 1868 and 1869; and that the greatest number of births occurred one month later: Whether or not there was any peculiarity of climate, during the time which could influence, in this manner, the births and deaths which occurred in 1870, remains to be ascertained; examination can be made further on in connection with the causes of death.

As previously stated concerning births and marriages, so also it will be seen by Table II., and Diagram No. 5, that the proportion of deaths returned as having occurred in each season of the year is very nearly the same in every year. Comparing the lines representing deaths, in Diagram No. 5, one year with another, it is true there are variations, but these variations apparently bear about the same relation to those greater differences shown to exist between different seasons of the same year, as the variations in the general character of the same seasons from year to year do to the greater differences between the climatic conditions of summer and winter. This evidence is undoubtedly influenced somewhat by the method and time of collection, as previously suggested. It will be seen by Table II., and Diagram No. 5, that in 1868 the least number of deaths were returned for June; while for January and February not only a greater proportion of the deaths for 1868 were returned, but even a greater number of deaths than were returned for those months in 1869 and 1870. The deaths which occurred in January and February 1868 were collected

the following spring, at the time of the assessment made by the supervisors; while the deaths in these months of the years 1869 and 1870 were not collected until a year from the spring following each year. In Exhibit A, may be seen the order of mortality by months—beginning with the month of greatest mortality—for the years 1866 to 1870, inclusive, in the State of Massachusetts, and for the year 1853, in Kentucky. In Massachusetts the law requires deaths to be recorded by certain parties, within six months after their occurrence, but provides for no regular collection of those not recorded, by inquiry of any public officer. In Kentucky the deaths were required to be recorded by physicians, etc., and also collected by the assessors as in this State. What proportion of the deaths were recorded soon after occurrence, and what additional proportion were not collected until after the close of the year, does not appear; but it will be seen that the least number were returned for January, as in this State since the change of time of ending the collection year; while in Massachusetts, the least number were returned for June in every year, with no exceptions. Exhibit A also allows of a comparison between the order of mortality in Michigan, as returned by the Census Marshals and by the supervisors, for the year ending June 1st, 1870. It will at once be noticed in these columns that the months immediately preceding the time of collection of each class of statistics, appear to have a larger proportional mortality, compared with the other column; that the time which elapsed, amounting to nearly a year, before the deaths in August were collected for the Census, allowed a sufficient number to escape collection to bring that month after March and May, increased as the numbers for these two months were over the numbers returned by the supervisors by reason of their being immediately previous to the time of collection for the Census, which began on the first of June, while for the Registration Returns the deaths for these months were not collected until about a year had passed.

EXHIBIT A.

Months arranged in Order by Number of Deaths,—those having the Greatest Number first,—in Massachusetts for the years 1866 to 1870, inclusive; in Kentucky, for the year 1853; and in Michigan, for the Census Year ending June 1st, 1870, by the U. S. Census, and by the State Registration Returns.

Order.	Massachusetts.					Kentucky.	Michigan, for the Census Year Ending June 1, 1870.	
	1866.	1867.	1868.	1869.	1870.	1853.	Returned by Census Marshals.	Registration Returns.
1..	August.	August.	August.	August.	August.	August.	March.	September.
2..	September.	September.	September.	September.	July.	July.	May.	August.
3..	July.	December.	July.	March.	September.	September.	August.	October.
4..	March.	January.	March.	July.	October.	October.	September.	December.
5..	October.	March.	October.	October.	March.	December.	April.	March.
6..	January.	July.	December.	May.	December.	June.	February.	May.
7..	November.	November.	April.	April.	November.	March.	October.	July.
8..	December.	October.	February.	December.	January.	April.	December.	November.
9..	April.	May.	January.	January.	May.	November.	January.	April.
10..	May.	February.	November.	February.	April.	February.	July.	June.
11..	February.	April.	May.	November.	February.	May.	November.	February.
12..	June.	June.	June.	June.	June.	January.	June.	January.

It was the intention of the compiler in this report to take up and discuss the relations existing between the death-rate and the climatic conditions, by months, demonstrating such relations by means of tables and diagrams which should exhibit the mortality, the temperature, and other important climatic conditions, suitably combined to facilitate their proper comparison; but a more thorough study of the subject, and particularly the experience in combining statistics collected by different methods at different times, has convinced him that a more useful service to the people, in the end, would be such a demonstration of the difficulties in the way of reaching accurate conclusions on the subject of the death-rate by months as should lead to some modification of the law, and, what is equally important, give to the officers whose duty it is to collect these statistics, and to the people at large, in whose interest they are collected, not only a better knowledge of some of the uses to which they may be put, but also the directions in which there are tendencies to error, in order that all may the better co-operate to prevent the recurrence of such errors.

It would perhaps be possible to make such corrections for the deaths omitted in the collection as would give an approximation to the true number of deaths, from all causes, by months; in fact such corrections have been made, and some details concerning them may be found in the introduction to this Report. But the relations between the total number of deaths and the various conditions of climate, are too complex for comprehension at present, for the reason that conditions favorable to one disease are often unfavorable to others. Consequently, if the relations as to cause and effect which exist between the various surrounding conditions and the death-rate at different seasons of the year, are to be ascertained with any great degree of accuracy, they must be learned for each disease separately; and even then the conditions affecting each disease are so numerous that the mind which undertakes to

grasp them all, must be trained in a wide range of subjects, and have good powers of concentration, as well as of generalization, to successfully work out the causes of death; and no further complication of the question should be made with corrections for omissions in returns, when it is possible to have the deaths collected by a plan which shall obtain the same proportion of them in every part of the year.

TABLE III.

Number and Percentage of Deaths of Males and Females from all Causes, by Months. (Unknown Sex Excluded.)

Year and Months.	Number.		Percentage.			
					Excess of	
	Males.	Females.	Males.	Females.	Males.	Females.
Year 1870	5,589	5,140	52.09	47.90	4.19	.....
January	225	195	53.57	46.42	7.15	.....
February	322	229	58.43	41.56	16.87	.....
March	372	350	51.52	48.47	3.05	.....
April	329	347	48.66	51.33	.....	2.67
May	348	339	50.65	49.34	1.31	.....
June	333	369	50.93	49.06	1.87	.....
July	573	506	53.10	46.89	6.21	.....
August	761	707	51.83	48.16	3.67	.....
September	708	651	52.09	47.90	4.19	.....
October	594	532	52.75	47.24	5.51	.....
November	433	448	51.87	48.12	3.75	.....
December	477	449	51.51	48.48	3.03	.....
Unknown Months	14	18	43.75	56.25	.....	12.50

Whether or not a greater proportion of the deaths are collected in some parts of the year, it appears probable that the sexes are equally well reported, and the proportion of each sex may therefore be correct. The months arranged in order by proportion of deaths of males—those having the greatest pro-

portion first—would be as follows: February, January, July, October, September, November, August, March, December, June, May, April. The average excess of deaths of males was 4.19 per cent. In the first four months above mentioned the excess was greater than this, in September it was just the average, and in the remaining seven months the excess was less than the average. In only one month was there an excess of deaths of females over males,—that month was April, and the excess was 2.67 per cent. In February, the excess of males was four times as great as the average. But the total death-rate in February was small; the unusual excess of males seems to have been due to the extremely low death-rate among females. The specified causes from which there was an excess of deaths of males in February, and of females in April, may be seen by referring to the table of "Specified Causes of Death, Alphabetically Arranged." Among the causes of the greatest excess of males in February were, Scarlatina, which caused an excess of fifteen; Pneumonia, fourteen; and Casualties, from which resulted an excess of twelve. The most prominent specified causes of death from which there was an excess of females in April were, Consumption, having an excess of twelve; Cephalitis, of eleven; Scarlatina, of eleven; and Puerperal Fever, from which there were eight deaths.

A more accurate view of the relative number and proportion of deaths in each month of each sex is afforded by Exhibit B. and Diagram No. 6; for the purposes of which the months have been made comparable by equalizing them all to the uniform length of 30.44 days. The proportion of each sex in any given month, however, is more truthfully shown in Table III.

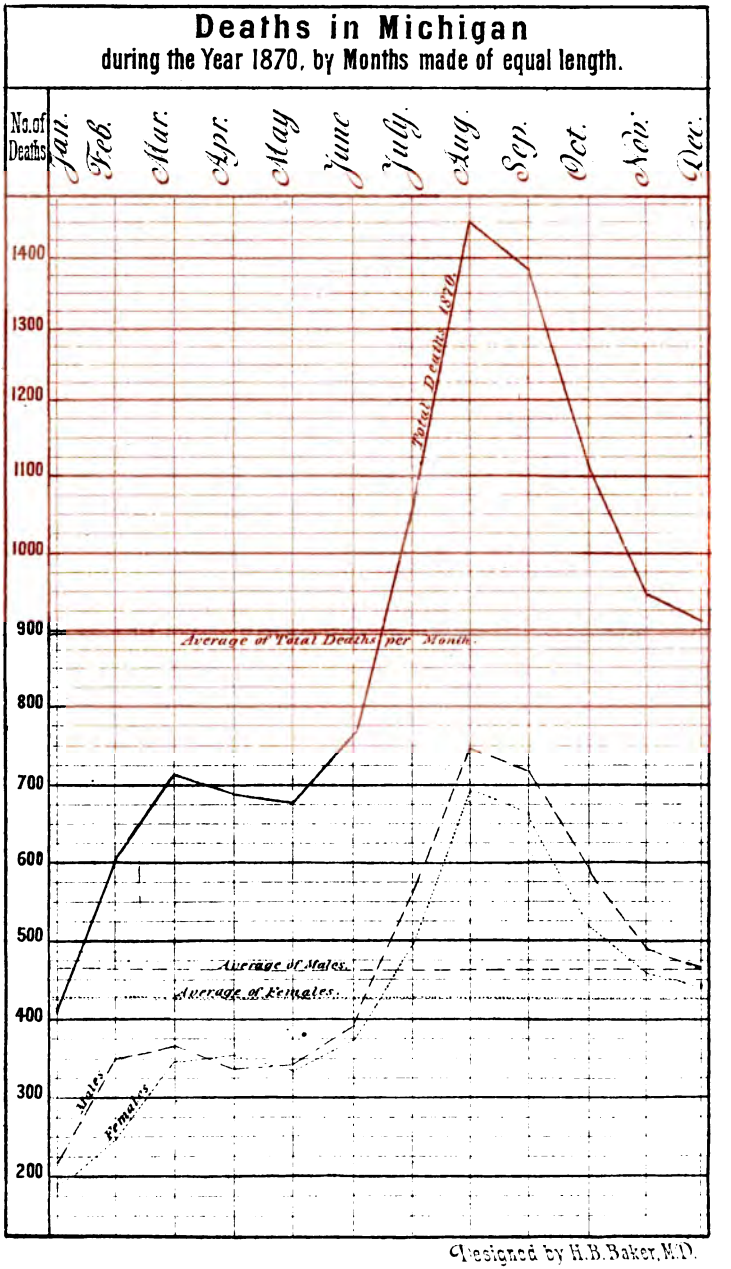
EXHIBIT B.

Deaths of each Sex, and Total Number, in Michigan during the Year 1870, by Months Equalized to uniform length of 30.44 days each;—Number of Deaths in each Month; Per Cent of Deaths in each Month to Total Deaths during the year; and Per Cent, and Excess of Per Cent, of Deaths of each Sex to Total of both Sexes.

YEAR AND MONTHS.	Number of Deaths.				Per Cent of Deaths in Each Month to Total during the Year.				Per Cent of Each Sex to Total of Both Sexes, Unknown Excluded.			
											Excess.	
	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Unknown.	Males.	Females.	Males.	Fem's.
Year 1870	10,766	5,589	5,140	37	100.00	100.00	100.00	100.00	52.09	47.90	4.19	------
January	414	221	192	1	3.84	3.95	3.73	2.70	53.51	46 48	7.03	------
February	602	350	249	3	5.59	6.26	4.84	8.10	58.43	41.56	16.87	------
March	711	366	344	1	6.60	6.54	6.69	2.70	51.54	48.45	3.09	------
April	688	334	353	1	6.39	5.97	6.86	2.70	48.61	51.38	------	2.77
May	677	342	333	2	6.28	6.11	6.47	5.40	50.66	49.33	1.33	------
June	766	389	375	2	7.11	6.96	7.29	5.40	50.91	49.08	1.83	------
July	1,066	563	498	5	9.90	10.07	9.68	13.51	53.06	46.93	7.13	------
August	1,449	748	696	5	13.45	13.38	13.54	13.51	51.80	48.19	3.61	------
September	1,385	718	662	5	12.86	12.84	12.87	13.51	52.02	47.97	4.05	------
October	1,118	584	528	6	10.33	10.44	10.17	16.21	52.75	47.24	5.51	------
November	948	491	455	2	8.80	8.78	8.85	5.40	51.90	47.94	3.96	------
December	912	469	442	1	8.47	8.39	8.59	2.70	51.48	48.51	2.97	------
Unknown	35	14	18	3	.32	.25	.35	8.10	43.75	56.25	------	12.50
Average *a*	894.25	464.58	426.83	2.83	8.33	8.33	8.33	8.33	------	------	------	------

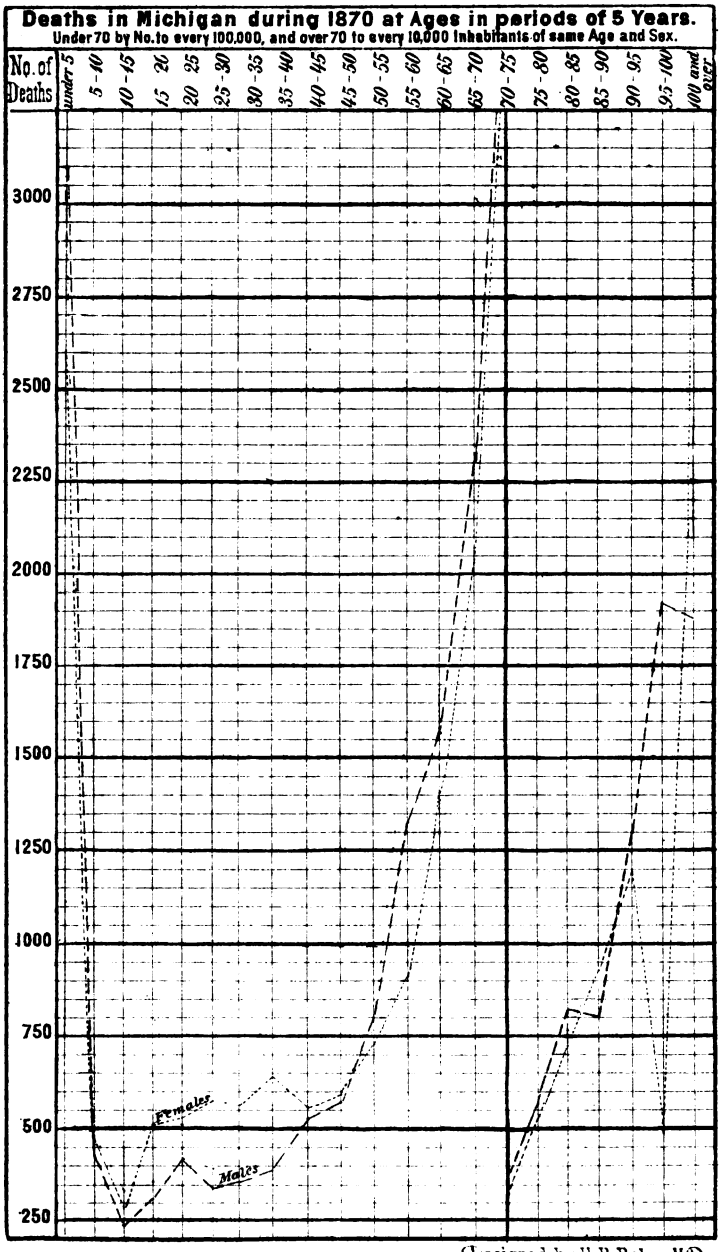
a Unknown month excluded.

DIAGRAM No 6.



Designed by H.B. Baker, M.D.

DIAGRAM Nº 8.



Designed by H.B. Baker, M.D

TABLE IV.

Exhibiting for all returned as having Died in Michigan during the Year 1870, at each Age and Period of Age, the Death-Rate, and the Number of Deaths, by Sex; the Excess of Death-Rate, and of Number of Deaths of each Sex; the Per Cent of Deaths at each Age to Total of all Ages; and the Per Cent, and Excess of Per Cent, of Deaths of each Sex to Total of both Sexes.

AGES.	Per Cent of Deaths to Population of Corresponding Sex and Age. a					Excess of the Sexes by Number.		Number of Deaths.				Per Cent of Deaths at each Age to Total of all Ages.	Per Cent of Each Sex to Total of Both Sexes.			
				Excess.											Excess.	
	Total. b	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Unknown.	Total.		Males.	Females.	Males.	Females.
All ages	.933	.980	.930	.....	.....	449	.....	5,589	5,140	37	10,766	100.00	52.092	47.907	4.185	.....
Under 1	8.404	9.095	7.495	1.600	.....	300	.....	1,462	1,162	30	2,654	24.65	55.71	44.28	11.43	.....
1 to 2	2.875	3.057	2.686	.371	.....	74	.....	481	407	.....	888	8.24	54.16	45.83	8.33	.....
2 to 3	1.411	1.491	1.328	.163	.....	37	.....	252	215	.....	467	4.33	53.96	46.03	7.93	.....
3 to 4	1.070	1.159	.982	.177	.....	29	.....	190	161	.....	351	3.26	54.13	45.86	8.27	.....
4 to 5	.739	.743	.735	.008	.....	7	.....	116	109	.....	225	2.08	51.55	48.44	3.11	.....
5 to 10	.448	.426	.470	.....	.044	.....	23	307	330	.....	637	5.91	48.19	51.80	.....	3.61
10 to 15	.261	.241	.281	.....	.040	.....	21	169	190	.....	359	3.33	47.07	52.92	.....	5.85
15 to 20	.404	.309	.501	.....	.192	.....	108	182	290	.....	472	4.38	38.55	61.44	.....	22.89

a Population used was only that of counties and townships from which returns of deaths in 1870 were received. *b* Including unknown sex.

TABLE IV.—CONTINUED.

AGES.	Per Cent of Deaths to Population of Corresponding Sex and Ages. a					Excess of the Sexes by Number.		Number of Deaths.				Per Cent of Deaths at each Age to Total of all Ages.	Per Cent of Each Sex to Total of Both Sexes.			
	Total. b	Males.	Females.	Excess. Males.	Excess. Females.	Males.	Females.	Males.	Females.	Unknown.	Total.		Males.	Females.	Excess. Males.	Excess. Females.
20 to 25	.466	.415	.521	.....	.106	.....	41	241	282	.....	523	5.85	46.08	53.91	.....	7.83
25 to 30	.459	.349	.577	.....	.228	.....	95	178	273	.....	451	4.19	39.46	60.53	.....	21.07
30 to 35	.454	.352	.561	.....	.209	.....	72	147	219	1	367	3.41	40.16	59.83	.....	19.67
35 to 40	.507	.382	.648	.....	.266	.....	74	148	222	.....	370	3.43	40.00	60.00	.....	20.00
40 to 45	.538	.523	.555	.....	.032	18	.....	167	154	.....	321	2.98	52.02	47.97	4.05	.....
45 to 50	.532	.570	.596	.....	.026	27	.....	157	130	.....	287	2.66	54.70	45.29	9.41	.....
50 to 55	.773	.807	.728	.079	.....	61	.....	191	130	.....	321	2.98	59.50	40.49	19.01	.....
55 to 60	1.141	1.317	.912	.405	.....	100	.....	213	113	.....	326	3.02	65.33	36.66	30.67	.....
60 to 65	1.509	1.585	1.406	.179	.....	57	.....	204	147	1	352	3.26	58.11	41.88	16.23	.....
65 to 70	2.202	2.312	2.063	.249	.....	56	.....	190	134	.....	324	3.00	58.64	41.35	17.29	.....
70 to 75	3.657	3.902	3.341	.561	.....	70	.....	209	139	.....	348	3.23	60.05	39.94	20.01	.....
75 to 80	5.525	5.592	5.446	.146	.....	27	.....	143	116	.....	259	3.40	55.21	44.78	10.43	.....
80 to 85	7.743	8.223	7.200	1.023	.....	20	.....	92	72	.....	164	1.52	56.09	43.90	12.19	.....

85 to 90	8.607	8.064	9.269	.....	1.205	2	.....	35	38	.....	68	.68	51.47	48.52	2.95	.....
90 to 95	12.500	18.000	11.956	1.044	.....	2	.....	13	11	.....	24	.22	54.16	45.83	8.33	.....
95 to 100	11.111	19.230	4.878	14.352	.....	3	.....	5	2	.....	7	.06	71.42	28.57	52.85	.....
100 and over	24.242	18.750	29.411	.....	10.661	.....	2	3	5	.....	8	.07	37.50	62.50	.....	25.00
Unknown ages	54.061	44.976	63.513	.....	18.537	.....	.....	94	94	5	193	1.79	50.00	50.00	.....	.....
Under 5	2.888	3.099	2.681	.468	.....	447	.....	2,501	2,054	30	4,585	42.58	54.90	45.09	9.81	.....

a Population of counties and townships from which returns of deaths were received. *b* Including unknown sex.

The per cent of each sex to total of both sexes, in the population June 1st, 1870, represented by deaths in 1870, is the same as the per cent of deaths of each sex to total number of deaths of both sexes during the year 1870; or in other words, the relation of each sex to total of all who died during the year 1870, is the same as the relation of each sex to the total population June 1st, 1870, of counties and townships from which returns of deaths in 1870 were received. Consequently the per cent of total deaths to population is the same for each sex. But, although this is true of the total at all ages, it is not true of any single age, or period of age, in the table. The tables of births show that there were in 1870, 108.8 males born, to every 100 females. But it will be seen by Table IV. that a larger proportion of males die during the first years of life, especially during the very first.

The very great proportion of the total deaths which occur among those under five years of age has been noticed in former reports. In 1870 this proportion was very nearly the same as stated in the report for 1869; it was then 42.81 per cent; for the year 1870 it now appears as 42.58 per cent. This was for five yearly ages; in 1870 we find that 24.65 per cent of all the deaths were of children under one year of age. Table IV. is very much more complete than in last report, giving information concerning each year of age under five, and by periods of five years, instead of ten, over twenty; the death-rate is also shown by sex, and the differences are exhibited between the death-rates of the sexes at each age and period of age.

The 2,654 deaths of children under one year of age includes 226, returned as still-born. In many cases so returned it is believed that death occurred during labor, or the children were actually born alive but died soon after birth. Throughout this report still-births are included in both births and deaths.

TABLE V.

Exhibiting by Sex, and by Months, the Age, in Periods of Years, of all Returned as having Died in Michigan during the Year 1870; and the Per Cent of Deaths at each Period of Age to the Population of Corresponding Age and Sex.

Ages in Years.	Sex.	Per Cent of Deaths During the Year to Population June 1st, 1870, by Sex. *a*	Year 1870.	Months.												
				January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
All under 1	Total	8.404	2,654	75	120	165	151	185	187	358	485	354	251	168	199	6
	Males	9.095	1,462	46	70	92	74	76	108	188	270	202	140	91	111	4
	Females	7.495	1,162	29	48	71	76	57	88	171	210	148	107	75	87	.....
	Unknown	.....	30	.....	2	2	1	2	1	4	5	4	4	2	1	2
All under 5	Total	2.888	4,585	188	221	277	259	246	308	588	784	659	447	309	346	8
	Males	3.099	2,501	81	136	158	130	142	164	301	422	360	244	164	194	5
	Females	2.681	2,054	57	88	117	128	102	143	278	357	295	199	143	151	1
	Unknown	.....	30	.....	2	2	1	2	1	4	5	4	4	2	1	2

a Population of counties and townships from which returns of deaths in 1870 were received.

TABLE V.—CONTINUED.

Ages in Years.	Sex.	Per Cent of Deaths During the Year to Population June 1st, 1870, by Sex. a	Year 1870.	MONTHS. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
5 to 10	Total	.448	687	26	40	49	49	48	44	60	78	68	59	52	69	------
	Males	.426	307	8	22	23	19	21	27	34	35	37	27	24	30	------
	Females	.470	330	18	18	26	30	27	17	26	43	26	32	28	39	------
10 to 15	Total	.261	359	18	24	25	28	22	18	34	36	44	42	30	37	1
	Males	.241	169	7	14	11	14	8	7	24	19	17	15	18	15	------
	Females	.281	190	11	10	14	14	14	11	10	17	27	27	12	22	1
15 to 20	Total	.404	472	26	21	31	37	28	34	40	48	62	54	55	40	1
	Males	.309	182	14	9	12	11	9	8	24	16	20	20	21	18	------
	Females	.501	290	12	12	19	26	14	26	16	32	42	34	34	22	1
20 to 25	Total	.466	528	30	19	37	38	43	43	46	55	59	61	50	41	1
	Males	.415	241	19	8	20	17	19	20	23	32	22	27	21	13	------
	Females	.521	282	11	11	17	21	24	23	23	23	37	34	29	28	1

25 to 30	Total	.459	451	26	18	30	22	38	38	32	47	46	58	48	51	2
	Males	.349	178	7	8	9	7	19	11	12	22	21	28	17	21	1
	Females	.577	278	19	10	21	15	19	27	20	25	25	30	31	30	1
30 to 35	Total	.454	367	13	18	32	24	27	39	34	44	35	36	30	38	2
	Males	.352	147	7	5	10	12	7	12	18	15	17	17	15	12	.....
	Females	.561	219	6	13	22	12	20	27	16	29	18	19	15	21	1
	Unknown	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
35 to 40	Total	.507	370	13	21	33	24	37	27	30	46	35	41	29	33	1
	Males	.382	148	6	11	10	7	15	13	13	20	13	16	12	12	.....
	Females	.648	222	7	10	23	17	22	14	17	26	22	25	17	21	1
40 to 45	Total	.588	321	13	18	27	17	25	26	23	31	35	39	37	28	2
	Males	.523	167	7	9	13	11	12	18	9	13	20	18	22	14	1
	Females	.555	154	6	9	14	6	13	8	14	18	15	21	15	14	1
45 to 50	Total	.582	287	14	21	28	21	20	15	27	29	27	28	41	16	.....
	Males	.570	157	6	10	14	14	14	9	10	15	16	14	24	11	.....
	Females	.596	130	8	11	14	7	6	6	17	14	11	14	17	5	.....

a Population of counties and townships from which returns of deaths in 1870 were received.

TABLE V.—CONTINUED.

Ages in Years.	Sex.	Per Cent of Deaths During the Year to Population June 1st, 1870, by Sex. a	Year 1870.	MONTHS. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
50 to 60	Total	.923	647	31	41	46	41	40	48	46	67	92	68	67	59	1
	Males	1.014	404	21	28	28	25	23	25	27	38	00	48	44	36	1
	Females	.808	243	10	13	18	16	17	23	19	29	32	20	23	23	.....
60 to 70	Total	1.777	676	30	34	50	49	53	47	41	75	80	79	69	67	2
	Males	1.868	394	14	22	32	28	30	28	30	38	46	48	39	39	.....
	Females	1.658	281	16	12	18	21	23	19	11	37	34	30	30	28	2
	Unknown	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
70 to 80	Total	4.274	607	26	38	28	37	39	36	49	33	66	77	65	62	1
	Males	4.448	352	16	26	16	20	18	22	27	44	36	52	38	36	1
	Females	4.054	255	10	12	12	17	21	14	22	39	30	25	27	26	.....

80 to 90	Total	7.977	232	9	10	16	13	16	12	19	30	34	24	21	28	.....
	Males	8.182	127	9	7	8	4	8	9	8	20	14	12	13	15	.....
	Females	7.748	105	.....	3	8	9	8	3	11	10	20	12	8	13	.....
90 to 100	Total	11.969	31	1	1	3	1	5	6	2	4	2	4	2	.....	.....
	Males	14.285	18	1	1	2	.....	4	4	1	1	.....	2	2	.....	.....
	Females	9.774	13	.....	.....	1	1	1	2	1	3	2	2	.....	.....	.....
100 and over	Total	24.242	8	.....	1	.....	.....	1	1	.....	1	1	2	.....	1	.....
	Males	18.750	3	.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....
	Females	29 411	5	.....	.....	.....	.....	1	1	.....	1	1	1	.....	.....	.....
Unknown	Total	54.061	198	8	7	14	16	10	13	14	17	21	20	26	14	18
	Males	44.976	94	3	5	7	8	3	6	9	11	8	12	9	8	5
	Females	63.513	94	4	2	7	7	7	6	4	6	13	7	17	6	3
	Unknown	.....	5	1	.....	.....	1	.....	1	1	.....	.....	1	.....	.....	.....

a Population of counties and townships from which returns of deaths in 1870 were received.

EXHIBIT C.

Concerning Deaths in Michigan during the Year 1870; Months arranged in order by Number of Deaths from All Causes,—those in which the Greatest Mortality occurred First; at All Ages; Still-born; All under One, and All under Five, including Still-born; and at All Ages, by Periods of Five Years each.

ALL AGES.	Still-born.	All under 1.	All under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.
August.	August.*	August.	August.	August.	September.	September.	October.	October.	August.
September.	December.*	July.	September.	December.	October.	November.	September.	December.	June.
October.	November.	September.	July.	September.	December.	October.	August.	November.	October.
July.	July.	October.	October.	July.	August.	August.	November.	August.	September.
November.	June.	December.	December.	October.	July.	July. *	July.	September.	July.
December.	September. †	June.	November.	November.	November.	December. *	May. *	May. *	December.
June.	March. †	November.	June.	March. *	April.	April.	June. *	June. *	March.
March.	April. ‡	March.	March.	April. *	March.	June.	December.	July.	November.
May.	February. ‡	April.	April.	May.	February.	March.	April.	March.	May.
April.	October. ‡	May.	May.	June.	May.	January.	March.	January.	April.
February.	May.	February.	February.	February.	June. *	May.	January.	April.	February.
January.	January.	January.	January.	January.	January. *	February.	February.	February.	January.

* Months having the same number of deaths. † Months having the same number of deaths. ‡ Months having the same number of deaths.

EXHIBIT C—CONTINUED.

35 to 40.	40 to 45.	45 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 & over.	Unknown.
August.	October.	November.	September.	September.	August.	September.	June.	October.	November.
October.	November.	August.	October.	October.	October.	August.	May.	December. *	September.
May.	September.	October. *	November.	August.	September.	December.	August. *	September. *	October.
September.	August.	March. *	August.	November.	November.	October.	October. *	August. *	August.
December. *	December.	July. †	December.	December.	December.	November.	March.	June. *	April.
March. *	March.	September. †	June.	May.	July.	July.	July. †	May. *	March. *
July.	June.	February. ‡	July. *	March.	May.	March. *	September. †	February. *	July. *
November.	May.	April. ‡	March. *	April.	February.	May. *	November. †	.....	December. *
June.	July.	May.	February. †	June.	April.	April.	April. ‡	.....	June.
April.	February.	December.	April. †	July.	June.	June.	February. ‡	.....	May.
February.	April.	June.	May.	February.	March.	February.	January. ‡	.....	January.
January.	January.	January.	January.	January.	January.	January.	.....	.....	February.

* Months having the same number of deaths. † Months having the same number of deaths. ‡ Months having the same number of deaths.

In the foregoing Exhibit the order might in some cases be slightly changed if the months were made perfectly comparable by equalizing them to a uniform length. This has not yet been attempted. It should also be borne in mind that the order might be somewhat changed if the same proportion of the total number of deaths were collected in every month.

TABLE VI.

Exhibiting, by Sex, and by Months, the Ages in Twelfths of a Year for those under One, and in Years for those over One Year of Age, of all Returned as having Died in Michigan during the Year 1870; and the Per Cent of Deaths at each Age, by Sex, to the Population of Corresponding Age and Sex.

Ages in Years and Twelfths of a Year.	Sex.	Per Cent of Deaths During the Year to Population June 1st, 1870, by Sex. *	Year 1870.	Months. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
All Ages.	Total	† .983	10,766	421	553	724	678	689	754	1,084	1,473	1,368	1,182	983	927	35
	Males	.980	5,589	225	322	372	329	348	383	573	761	708	594	483	477	14
	Females	.980	5,140	195	229	350	347	339	369	506	707	651	582	448	449	18
	Unknown	.....	37	1	2	2	2	2	2	5	5	4	6	2	1	3
Under 1-12. ‡	Total	898.770	973	36	55	76	70	58	81	108	129	111	81	80	89	4
	Males	466.666	546	20	35	45	31	27	50	55	77	62	48	49	45	2
	Females	314.960	400	16	18	29	38	29	31	44	49	45	29	29	43	.....
	Unknown	.....	27	.....	2	2	1	2	.....	4	3	4	4	2	1	2

1-12.	Total	6.575	249	6	10	22	11	14	17	24	42	36	29	17	20	1
	Males	7.299	140	2	8	11	6	6	7	12	25	24	17	9	12	1
	Females	5.671	106	4	2	11	5	8	9	12	15	12	12	8	8	.....
	Unknown	.....	3	.....	.....	.....	.....	.....	1	.....	2	.....	.....	.....	.....	.....
2-12.	Total	6.883	212	4	9	11	11	7	11	21	33	37	22	17	29	.....
	Males	7.529	114	2	3	8	8	4	5	11	18	20	11	7	17	.....
	Females	6.257	98	2	6	3	3	3	6	10	15	17	11	10	12	.....
3-12.	Total	5.520	185	6	8	9	11	9	11	29	40	18	25	9	10	.....
	Males	5.674	98	5	4	6	6	6	5	16	20	7	12	7	4	.....
	Females	5.357	87	1	4	3	5	3	6	13	20	11	13	2	6	.....
4-12.	Total	5.155	157	4	6	9	8	8	12	26	38	17	11	8	10	.....
	Males	6.089	97	4	5	4	6	7	8	14	25	7	7	3	7	.....
	Females	4.132	60	.....	1	5	2	1	4	12	13	10	4	5	3	.....
5-12.	Total	4.765	133	7	3	8	5	7	12	19	29	23	12	4	4	.....
	Males	5.185	72	5	2	4	2	6	4	11	14	9	9	2	4	.....
	Females	4.391	61	2	1	4	3	1	8	8	15	14	3	2	.....	.....

* Population used was only that of counties and townships represented by returns of deaths in 1870. Disregarding the decimal point, the figures in this column represent the number of deaths in every 100,000 inhabitants of same sex and age.
† Includes unknown sex. ‡ Still-births included. See remarks following this table.

TABLE VI.—CONTINUED.

Ages in Years and Twelfths of a Year.	Sex.	Per Cent of Deaths During the Year to Population June 1st, 1870, by Sex. *	Year 1870.	Months. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
6-12.	Total	4.686	159	2	9	7	5	5	9	41	34	21	9	6	11	.....
	Males	5.158	88	1	5	3	1	3	4	22	18	17	5	2	7	.....
	Females	4.208	71	1	4	4	4	2	5	19	16	4	4	4	4	.....
7-12.	Total	4.166	106	3	6	1	5	6	8	17	22	15	12	3	8	.....
	Males	5.250	68	2	1	.....	2	4	6	9	14	12	10	2	6	.....
	Females	3.042	38	1	5	1	3	2	2	8	8	3	2	1	2	.....
8-12.	Total	3.737	110	3	2	6	4	6	7	22	22	13	15	4	6	.....
	Males	3.976	61	2	1	4	2	5	4	9	16	6	6	1	5	.....
	Females	3.477	49	1	1	2	2	1	3	13	6	7	9	3	1	.....

9-12.	Total	4.602	121	2	3	7	6	4	9	19	27	21	9	11	3	.....
	Males	4.592	62	1	2	4	1	2	6	7	13	13	5	6	2	.....
	Females	4.612	59	1	1	3	5	2	3	12	14	8	4	5	1	.....
10-12.	Total	5.493	127	2	3	6	7	7	5	21	34	19	13	3	6	1
	Males	5.136	60	2	1	1	5	5	1	8	17	12	5	1	1	1
	Females	5.856	67	.....	2	5	2	2	4	13	17	7	8	2	5	.....
11-12.	Total	8.350	122	.....	6	3	8	4	5	16	35	23	13	6	3	.....
	Males	7.436	56	.....	3	2	4	1	3	9	13	13	5	2	1	.....
	Females	9.322	66	.....	3	1	4	3	2	7	22	10	8	4	2	.....
1.	Total	2.875	888	22	35	42	55	38	51	123	178	137	93	58	54	2
	Males	3.057	481	11	22	32	31	22	29	65	96	71	48	25	28	1
	Females	2.686	407	11	13	10	24	16	22	58	82	66	45	33	26	1
2.	Total	1.411	467	20	24	23	23	26	32	57	58	86	50	37	36	.....
	Males	1.491	252	10	15	7	13	18	8	31	24	49	33	22	22	.....
	Females	1.328	215	10	9	16	10	8	24	26	29	37	17	15	14	.....
3.	Total	1.070	351	15	24	27	19	32	20	31	40	50	29	27	37	.....
	Males	1.159	190	9	19	14	7	21	13	14	22	22	10	16	23	.....
	Females	.982	161	6	5	13	12	11	7	17	18	28	19	11	14	.....

* Population used was only that of counties and townships represented by returns of deaths in 1870. Disregarding the decimal point, the figures in this column represent the number of deaths in every 100,000 inhabitants of same age and sex.

TABLE VI.—CONTINUED.

Ages in Years.	Sex.	Per Cent of Deaths During the Year to Population June 1st, 1870, by Sex. *	Year 1876.	MONTHS. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
4.	Total	.739	225	6	18	20	11	15	18	14	28	32	24	19	20	.....
	Males	.743	116	5	10	13	5	5	11	8	10	16	13	10	10	.....
	Females	.735	109	1	8	7	6	10	7	6	18	16	11	9	10	.....
5.	Total	.671	189	6	8	18	8	11	14	15	22	24	22	18	23	.....
	Males	.671	96	.....	5	9	3	6	8	10	12	13	14	5	11	.....
	Females	.672	93	6	3	9	5	5	6	5	10	11	8	13	12	.....
6.	Total	.526	151	6	9	5	13	19	8	17	18	15	15	12	14	.....
	Males	.479	69	3	6	2	5	8	4	9	7	9	4	6	6	.....
	Females	.574	82	3	3	3	8	11	4	8	11	6	11	6	8	.....

7.	Total	.367	103	7	6	7	12	5	10	7	15	9	3	11	11	.....
	Males	.383	47	3	2	4	2	2	6	3	7	6	1	7	4	.....
	Females	.402	56	4	4	3	10	3	4	4	8	3	2	4	7	.....
8.	Total	.352	103	6	9	9	8	8	5	12	12	9	10	5	10	.....
	Males	.358	53	1	4	4	5	5	3	7	5	6	5	4	4	.....
	Females	.346	50	5	5	5	3	3	2	5	7	3	5	1	6	.....
9.	Total	.324	91	1	8	10	8	5	7	9	11	6	9	6	11	.....
	Males	.291	42	1	5	4	4	.....	6	5	4	3	3	2	5	.....
	Females	.358	49	.....	3	6	4	5	1	4	7	3	6	4	6	.....
10.	Total	.255	76	2	1	6	3	3	1	10	11	11	5	10	12	1
	Males	.280	43	1	.....	2	3	1	.....	9	6	4	3	7	7	.....
	Females	.229	33	1	1	4	.....	2	1	1	5	7	2	3	5	1
11.	Total	.246	65	5	6	7	5	4	3	4	7	5	9	5	5	.....
	Males	.226	30	2	2	4	3	1	1	3	4	1	4	3	2	.....
	Females	.267	35	3	4	3	2	3	2	1	3	4	5	2	3	.....
12.	Total	.258	76	3	4	5	7	3	7	5	9	11	11	7	4	.....
	Males	.253	38	3	2	2	4	1	4	4	5	8	3	2	.....	.....
	Females	.264	38	.....	2	3	3	2	3	1	4	3	8	5	4	.....

* Population used was only that of counties and townships represented by returns of deaths in 1870. Disregarding the decimal point, the figures in this column represent the number of deaths in every 100,000 inhabitants of same sex and age.

TABLE VI.—CONTINUED.

Ages in Years.	Sex.	Per Cent of Deaths During the Year to Population June 1st, 1870, by Sex.*	Year 1870.	Months. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
13.	Total	.283	74	4	5	3	6	7	4	7	3	10	12	4	9	.....
	Males	.221	29	1	4	2	1	3	1	4	2	2	3	3	3	.....
	Females	.347	45	3	1	1	5	4	3	3	1	8	9	1	6	.....
14.	Total	.263	68	4	8	4	7	5	3	8	6	7	5	4	7	.....
	Males	.219	29	.....	6	1	3	2	1	4	2	2	2	3	3	.....
	Females	.308	39	4	2	3	4	3	2	4	4	5	3	1	4	.....
15.	Total	.377	87	8	.....	6	13	5	10	6	7	10	5	11	6	.....
	Males	.283	27	3	.....	1	5	2	2	4	3	4	1	2	.....	.....
	Females	.524	60	5	.....	5	8	3	8	2	4	6	4	9	6	.....
16.	Total	.312	77	6	3	8	5	3	5	3	7	14	9	9	4	1
	Males	.235	29	3	1	2	1	3	1	3	2	4	3	2	4	.....
	Females	.391	48	3	2	6	4	.....	4	.....	5	10	6	7	.....	1

17.	Total	.429	97	5	4	3	8	3	7	16	8	10	15	12	6	.....
	Males	.330	38	3	2	2	4	1	1	10	2	3	5	4	1	.....
	Females	.581	59	2	2	1	4	2	6	6	6	7	10	8	5	.....
18.	Total	.340	84	4	6	2	3	3	4	6	15	10	7	7	17	.....
	Males	.255	31	4	2	1	.....	.....	1	3	4	1	3	4	8	.....
	Females	.423	53	.....	4	1	3	3	3	3	11	9	4	3	9	.....
19.	Total	.585	127	3	8	12	8	9	8	9	11	18	18	16	7	.....
	Males	.508	57	1	4	6	1	3	3	4	5	8	8	9	5	.....
	Females	.662	70	2	4	6	7	6	5	5	6	10	10	7	2	.....
20.	Total	.397	96	3	4	6	7	11	6	8	10	13	10	7	11	.....
	Males	.367	44	2	2	2	2	3	5	3	6	8	5	2	4	.....
	Females	.427	52	1	2	4	5	8	1	5	4	5	5	5	7	.....
21.	Total	.544	115	8	4	10	13	9	9	10	12	6	13	10	11	.....
	Males	.576	66	5	3	7	7	4	5	4	11	2	9	6	3	.....
	Females	.506	49	3	1	3	6	5	4	6	1	4	4	4	8	.....
22.	Total	.514	118	11	3	4	5	9	12	11	14	14	14	11	10	.....
	Males	.381	45	6	.....	2	2	5	5	6	7	1	5	4	2	.....
	Females	.654	73	5	3	2	3	4	7	5	7	13	9	7	8	.....

* Population used was only that of counties and townships represented by returns of deaths in 1870. Disregarding the decimal point, the figures in this column represent the number of deaths in every 100,000 inhabitants of same sex and age.

TABLE VI.—Continued.

Ages in Years.	Sex.	Per Cent of Deaths During the Year to Population June 1st, 1870, by Sex.*	Year 1870.	Months.												
				January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
23.	Total	.426	96	4	3	6	4	6	7	7	16	13	9	12	5	1
	Males	.412	47	3	1	4	1	4	3	3	6	6	5	8	3	.....
	Females	.442	46	1	2	2	3	2	4	4	10	7	4	4	2	1
24.	Total	.456	101	4	5	11	9	8	9	10	3	13	15	10	4	.....
	Males	.342	39	3	2	5	5	3	2	7	2	5	3	1	1	.....
	Females	.577	62	1	3	6	4	5	7	3	1	8	12	9	3	.....
25.	Total	.374	86	8	1	6	6	9	5	4	12	7	10	8	10	.....
	Males	.290	35	3	.....	2	2	4	1	.....	8	2	5	3	5	.....
	Females	.468	51	5	1	4	4	5	4	4	4	5	5	5	5	.....
26.	Total	.466	97	4	2	9	7	2	8	8	10	14	13	13	7	.....
	Males	.367	39	1	1	3	3	2	3	5	5	8	8	3	2	.....
	Females	.569	58	3	1	6	4	.....	5		5	6	10	10	5	.....

27.	Total	.508	93	7	4	7	3	11	5	11	9	5	12	9	10	--------
	Males	.369	35	2	2	2	--------	5	2	3	3	3	5	2	6	--------
	Females	.658	58	5	2	5	3	6	3	8	6	2	7	7	4	--------
28.	Total	.466	99	6	5	6	3	10	9	4	6	16	13	7	13	1
	Males	.325	36	--------	1	2	1	4	2	2	3	7	5	4	4	1
	Females	.619	63	6	4	4	2	6	7	2	3	9	8	3	9	--------
29.	Total	.510	76	1	6	2	3	6	11	5	10	4	5	11	11	1
	Males	.426	33	1	4	--------	1	4	3	2	3	1	5	5	4	--------
	Females	.600	43	--------	2	2	2	2	8	3	7	3	--------	6	7	1
30.	Total	.332	82	2	5	7	5	6	8	10	6	3	2	5	11	--------
	Males	.226	30	2	1	3	1	--------	1	6	2	4	5	1	4	--------
	Females	.456	52	--------	4	4	4	6	7	4	4	4	4	4	7	--------
31.	Total	.605	72	3	3	6	7	6	7	2	10	6	8	6	8	--------
	Males	.510	31	3	--------	3	5	1	3	--------	4	2	6	2	2	--------
	Females	.708	41	--------	3	3	2	5	4	2	6	4	2	4	6	--------

* Population used was only that of counties and townships represented by returns of deaths in 1870. Disregarding the decimal point, the figures in this column represent the number of deaths in every 100,000 inhabitants of same sex and age.

TABLE VI.—CONTINUED.

Ages in Years.	Sex.	Per Cent of Deaths During the Year to Population June 1st, 1870, by Sex. *	Year 1870.	Months.												
				January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
32.	Total	.466	56	2	8	7	5	4	7	8	10	12	7	5	4	1
	Males	.381	42	.....	.....	3	2	1	3	4	1	7	1	3	2	.....
	Females	.592	77	2	8	4	3	3	4	4	9	5	6	2	2	.....
	Unknown	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
33.	Total	.461	66	2	2	6	3	4	8	7	7	5	5	9	7	1
	Males	.443	32	1	1	1	2	3	4	6	3	1	3	5	2	.....
	Females	.480	34	1	1	5	1	1	4	1	4	4	2	4	5	1
34.	Total	.521	72	4	5	6	4	7	9	7	11	4	7	5	3	.....
	Males	.383	27	1	3	.....	2	2	1	2	5	3	2	4	2	.....
	Females	.666	45	3	2	6	2	5	8	5	6	1	5	1	1	.....

35.	Total	.503	94	5	5	9	6	8	7	7	12	7	12	9	7	1
	Males	.329	34	2	3	2	1	4	4	4	5	3	2	2	2	.....
	Females	.716	60	3	2	7	5	4	3	3	7	4	10	7	4	1
36.	Total	.396	59	1	7	1	4	7	1	5	6	6	6	3	12	.....
	Males	.328	25	1	4	.....	1	2	1	3	5	2	2	3	1	.....
	Females	.467	34	.....	3	1	3	5	.....	2	1	4	4	.....	11	.....
37.	Total	.511	67	3	3	14	4	8	3	6	4	9	4	4	5	.....
	Males	.368	25	1	2	3	2	3	1	1	1	4	2	2	3	.....
	Females	.675	42	2	1	11	2	5	2	5	3	5	2	2	2	.....
38.	Total	.594	89	2	3	7	8	5	8	6	15	6	13	8	8	.....
	Males	.507	40	1	1	4	3	1	4	3	6	2	7	4	4	.....
	Females	.691	49	1	2	3	5	4	4	3	9	4	6	4	4	.....
39.	Total	.540	61	2	3	2	2	9	3	6	9	7	6	5	2	.....
	Males	.399	24	1	1	1	.....	5	3	2	3	2	3	1	2	.....
	Females	.701	37	1	2	1	2	4	5	4	6	5	3	4	.....	.....
40.	Total	.318	64	2	4	7	4	4	7	8	5	7	4	4	8	.....
	Males	.322	36	1	2	4	3	1	5	2	4	4	1	4	5	.....
	Females	.313	28	1	2	3	1	3	2	6	1	3	3	.....	3	.....

* Population used was only that of counties and townships represented by returns of deaths in 1870. Disregarding the decimal point, the figures in this column represent the number of deaths in every 100,000 inhabitants of same sex and age.

TABLE VI.—CONTINUED.

Ages in Years.	Sex.	Per Cent of Deaths During the Year to Population June 1st, 1870, by Sex.*	Year 1870.	MONTHS. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
41.	Total	.584	49	.....	2	5	2	5	5	1	5	6	8	6	3	1
	Males	.513	23	.....	1	3	1	4	5	.....	1	2	3	3	.....	.....
	Females	.665	26	.....	1	2	1	1	.....	1	4	4	5	3	3	1
42.	Total	.641	74	4	6	5	5	5	2	8	7	6	8	12	6	.....
	Males	.538	33	1	3	2	3	1	2	3	3	4	4	3	4	.....
	Females	.758	41	3	3	3	2	4	.....	5	4	2	4	9	2	.....
43.	Total	.709	69	6	2	2	5	6	5	3	4	10	14	6	6	.....
	Males	.735	37	4	1	2	3	3	1	1	1	5	9	5	2	.....
	Females	.680	32	2	1	.....	2	3	4	2	3	5	5	1	4	.....
44.	Total	.659	65	1	4	8	1	5	7	3	10	6	5	9	5	1
	Males	.751	38	1	2	2	1	3	5	3	4	5	1	7	3	1
	Females	.562	27	.....	2	6	.....	2	2	.....	6	1	4	2	2	.....

45.	Total	.485	63	4	3	5	5	4	3	6	3	6	12	3	4	.....
	Males	.413	35	2	1	2	4	3	2	1	3	4	7	2	4	.....
	Females	.465	28	2	2	3	1	1	1	5	.....	2	5	6	.....	.....
46.	Total	.529	50	1	2	6	3	1	4	3	10	3	1	14	2	.....
	Males	.669	35	1	1	5	3	1	3	2	6	2	.....	9	2	.....
	Females	.355	15	.....	1	1	.....	.....	1	1	4	1	1	5	.....	.....
47.	Total	.622	51	1	6	3	3	6	1	7	5	8	2	5	4	.....
	Males	.535	24	1	4	1	2	3	.....	2	1	4	2	4	.....	.....
	Females	.725	27	.....	2	2	1	3	1	5	4	4	.....	1	4	.....
48.	Total	.665	63	5	8	6	4	2	5	8	6	4	7	7	1	.....
	Males	.567	29	1	4	1	3	2	2	3	3	2	3	4	1	.....
	Females	.780	34	4	4	5	1	.....	3	5	3	2	4	3	.....	.....
49.	Total	.775	60	3	2	8	6	7	2	3	5	6	6	7	5	.....
	Males	.800	34	1	.....	5	2	5	2	2	2	4	2	5	4	.....
	Females	.745	26	2	2	3	4	2	.....	1	3	2	4	2	1	.....
50.	Total	.599	83	6	3	8	11	6	10	7	5	6	3	10	7	1
	Males	.585	47	5	2	4	6	4	4	2	2	4	2	7	4	1
	Females	.618	36	1	1	4	5	2	6	5	3	2	1	3	3	.....

* Population used was only that of counties and townships represented by returns of deaths in 1870. Disregarding the decimal point, the figures in this column represent the number of deaths in every 100,000 inhabitants of same sex and age.

TABLE VI.—CONTINUED.

Ages in Years.	Sex.	Per Cent of Deaths During the Year to Population June 1st, 1870, by Sex. *	Year 1870.	Months. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
51.	Total	.799	48	3	5	3	.....	5	3	5	4	8	6	4	2	.....
	Males	.855	29	2	2	1	.....	2	3	2	3	5	4	3	2	.....
	Females	.726	19	1	3	2	.....	3	.....	3	1	3	2	1	.....	.....
52.	Total	.875	71	1	6	7	4	3	8	3	9	12	4	9	5	.....
	Males	.928	43	.....	5	4	3	2	4	.....	4	6	4	7	4	.....
	Females	.804	28	1	1	3	1	1	4	3	5	6	.....	2	1	.....
53.	Total	.877	60	3	3	7	3	8	3	3	4	3	5	7	6	.....
	Males	.874	34	1	3	5	2	4	.....	2	3	4	2	2	6	.....
	Females	.882	26	2	.....	2	1	4	3	1	1	4	3	5	.....	.....
54.	Total	.879	59	1	5	5	4	5	4	5	6	3	10	2	4	.....
	Males	1.020	38	1	1	4	2	2	2	4	4	6	9	2	1	.....
	Females	.708	21	.....	4	1	2	3	2	1	2	2	1	.....	3	.....

55.	Total	.988	71	4	1	3	3	2	5	7	9	11	11	7	8	.....
	Males	1.026	45	4	.....	2	2	2	2	4	5	6	8	4	6	.....
	Females	.806	26	.....	1	1	1	.....	3	3	4	5	3	3	2	.....
56.	Total	1.057	66	3	6	2	5	4	3	4	5	11	7	10	6	.....
	Males	1.076	38	1	4	2	2	2	1	3	1	7	3	8	4	.....
	Females	1.033	28	2	2	.....	3	2	2	1	4	4	4	2	2	.....
57.	Total	1.619	78	5	4	3	3	1	5	3	13	12	11	8	10	.....
	Males	1.988	54	3	4	.....	3	1	5	2	8	11	8	4	5	.....
	Females	1.143	24	2	.....	3	.....	.....	.....	1	5	1	3	4	5	.....
58.	Total	1.109	60	4	4	6	3	2	3	4	5	9	7	6	7	.....
	Males	1.456	44	3	3	5	2	1	2	3	4	8	4	5	4	.....
	Females	.669	16	1	1	1	1	1	1	1	1	1	3	1	3	.....
59.	Total	1.139	51	1	4	2	5	4	4	5	7	7	4	4	4	.....
	Males	1.271	32	1	4	1	3	3	2	5	4	3	4	2	.....	.....
	Females	.969	19	.....	.....	1	2	1	2	.....	3	4	.....	2	4	.....
60.	Total	.797	63	2	5	5	7	4	2	2	11	5	6	5	9	.....
	Males	.877	38	.....	4	3	5	2	1	1	7	2	3	3	7	.....
	Females	.700	25	2	1	2	2	2	1	1	4	3	3	2	2	.....

* Population used was only that of counties and townships represented by returns of deaths in 1870. Disregarding the decimal point, the figures in this column represent the number of deaths in every 100,000 inhabitants of same sex and age.

TABLE VI.—CONTINUED.

Ages in Years.	Sex.	Per Cent of Deaths During the Year to Population June 1st, 1870, by Sex. *	Year 1870.	MONTHS. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
61.	Total	1.652	56	3	1	4	8	5	5	3	3	3	12	5	4	.....
	Males	1.900	36	1	1	3	5	5	3	3	2	2	8	2	1	.....
	Females	1.337	20	2	.....	1	3	.....	2	.....	1	1	4	3	3	.....
62.	Total	2.027	86	4	4	5	5	4	3	6	5	17	14	5	14	.....
	Males	2.378	56	2	4	3	3	2	3	4	3	11	10	3	8	.....
	Females	1.589	30	2	.....	2	2	2	.....	2	2	6	4	2	6	.....
63.	Total	1.634	65	1	2	8	5	5	3	2	7	7	9	12	3	1
	Males	1.527	34	1	1	4	2	2	3	.....	2	5	6	7	1	.....
	Females	1.714	30	.....	1	4	3	3	.....	2	5	2	2	5	2	1
	Unknown	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....

64.	Total	2.152	82	7	7	4	8	5	8	3	8	8	8	14	7	.....
	Males	1.940	40	4	4	3	2	2	3	2	4	4	3	6	3	.....
	Females	2.401	42	3	3	1	1	3	5	1	4	4	5	8	4	.....
65.	Total	1.862	81	3	3	7	4	9	9	3	12	9	7	8	7	.....
	Males	2.118	52	.....	3	5	3	4	7	2	7	7	5	6	3	.....
	Females	1.585	29	3	.....	2	1	5	2	1	5	2	2	2	4	.....
66.	Total	2.082	65	2	4	2	8	9	6	2	8	7	4	7	6	.....
	Males	2.843	40	2	2	2	5	7	1	2	5	4	3	3	4	.....
	Females	1.768	25	.....	2	.....	3	2	5	.....	3	3	1	4	2	.....
67.	Total	2.580	67	3	2	5	2	6	4	8	7	9	6	8	7	.....
	Males	2.719	39	1	1	4	.....	3	2	7	2	4	3	6	6	.....
	Females	2.409	28	2	1	1	2	3	2	1	5	5	3	2	1	.....
68.	Total	2.182	52	2	2	5	3	3	3	7	7	5	4	3	7	1
	Males	1.762	23	2	.....	1	2	1	2	4	1	2	3	2	3	.....
	Females	2.559	29	.....	2	4	1	2	1	3	6	3	1	1	4	1
69.	Total	2.674	59	3	4	5	4	3	4	5	7	10	9	2	3	.....
	Males	2.748	36	1	2	4	1	2	3	5	5	5	4	1	3	.....
	Females	2.566	23	2	2	1	3	1	1	.....	2	5	5	1	.....	.....

* Population used was only that of counties and townships represented by returns of deaths in 1870. Disregarding the decimal point, the figures in this column represent the number of deaths in every 100,000 inhabitants of same age and sex.

TABLE VI.—CONTINUED.

Ages in Years.	Sex.	Per Cent of Deaths During the Year to Population June 1st, 1870, by Sex.*	Year 1870.	Months. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
70.	Total	2.261	84	2	5	6	7	5	5	11	10	9	12	6	6	.....
	Males	2.654	56	1	5	3	3	3	5	7	6	7	7	6	3	.....
	Females	1.744	28	1	.....	3	4	2	.....	4	4	2	5	.....	3	.....
71.	Total	4.478	61	2	5	4	2	5	2	6	9	4	10	8	4	.....
	Males	4.568	36	2	2	3	2	2	1	1	4	3	8	5	3	.....
	Females	4.355	25	.....	3	1	.....	3	1	5	5	1	2	3	1	.....
72.	Total	4.542	75	2	5	1	7	4	4	6	14	7	10	9	6	.....
	Males	5.274	48	2	4	1	4	3	2	3	7	4	8	6	4	.....
	Females	3.643	27	.....	1	.....	3	1	2	3	7	3	2	3	2	.....
78.	Total	4.288	64	2	4	4	4	4	5	8	4	10	4	6	9	.....
	Males	4.392	36	1	4	4	1	3	2	3	2	5	3	3	5	.....
	Females	4.223	28	1	.....	.....	3	1	3	5	2	5	1	3	4	.....

74.	Total	4.949	64	2	2	2	2	5	4	3	11	3	9	11	10	.....
	Males	4.608	33	2	1	.....	1	1	2	3	6	2	5	6	4	.....
	Females	5.372	31	.....	1	2	1	4	2	.....	5	1	4	5	6	.....
75.	Total	4.151	56	3	2	3	3	6	1	4	10	10	5	6	3	.....
	Males	4.246	31	3	.....	2	2	3	1	2	6	4	4	2	2	.....
	Females	4.038	25	.....	2	1	1	3	.....	2	4	6	1	4	1	.....
76.	Total	5.876	61	7	3	.....	1	3	4	3	9	9	6	5	10	1
	Males	5.545	32	3	2	.....	1	2	2	2	4	5	4	2	4	1
	Females	6.290	29	4	1	.....	.....	1	2	1	5	4	2	3	6	.....
77.	Total	6.064	53	2	4	4	3	4	4	3	2	6	10	3	3	.....
	Males	6.609	31	.....	3	2	2	1	3	2	1	2	7	2	6	.....
	Females	5.432	22	2	1	2	1	3	1	1	1	4	3	1	2	.....
78.	Total	5.073	45	2	3	1	5	3	4	3	6	3	4	7	4	.....
	Males	4.684	23	2	1	.....	2	.....	3	2	2	1	3	4	3	.....
	Females	5.555	22	.....	2	1	3	3	1	1	4	2	1	3	1	.....
79.	Total	8.163	44	2	5	3	3	.....	3	2	8	5	7	4	2	.....
	Males	8.965	26	.....	4	1	2	.....	1	2	6	3	3	2	2	.....
	Females	7.228	18	2	1	2	1	.....	2	.....	2	2	4	2	.....	.....

* Population used was only that of counties and townships represented by returns of deaths in 1870. Disregarding the decimal point, the figures in this column represent the number of deaths in every 100,000 inhabitants of same sex and age.

TABLE VI.—CONTINUED.

Ages in Years.	Sex.	Per Cent of Deaths During the Year to Population June 1st, 1870, by Sex.*	Year 1870.	MONTHS. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
90.	Total	14.942	13	.....	1	1	1	1	1	2	1	2	1	1	1	.....
	Males	15.555	7	.....	1	1	.....	.....	1	1	.....	1	.....	1	1	.....
	Females	14.285	6	.....	.....	.....	1	1	.....	1	1	1	1	.....	.....	.....
91.	Total	14.814	4	.....	.....	.....	1	.....	.....	1	.....	.....	1	.....	1	.....
	Males	20.000	3	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	1	.....
	Females	8.333	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
92.	Total	13.333	4	.....	.....	.....	.....	.....	2	1	.....	1	.....	.....	.....	.....
	Males	14.285	2	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....
	Females	12.500	2	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....
93.	Total	8.333	2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
	Males	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Females	15.384	2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....

94.	Total	4.166	1											1			
	Males	6.666	1											1			
	Females																
95.																	
96.																	
97.																	
98.	Total	27.272	3						1	1	1						
	Males	50.000	3						1	1	1						
	Females																
99.	Total	44.444	4				1		1	1				1			
	Males	50.000	2				1			1							
	Females	40.000	2						1					1			
100.	Total	26.315	5					1	1		1	1	1				
	Males																
	Females	41.666	5					1	1		1	1	1				
101.	Total	50.000	1		1												
	Males	100.000	1		1												

* Population used was only that of counties and townships represented by returns of deaths in 1870. Disregarding the decimal point, the figures in this column represent the number of deaths in every 100,000 inhabitants of same sex and age.

TABLE VI.—CONTINUED.

Ages in Years.	Sex.	Per Cent of Deaths During the Year to Population June 1st, 1870, by Sex. *	Year 1870.	MONTHS. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
90.	Total	14.942	13	.....	1	1	1	1	1	2	1	2	1	1	1	.....
	Males	15.555	7	.....	1	1	.....	.....	1	1	.....	1	.....	1	1	.....
	Females	14.285	6	.....	.....	.....	1	1	.....	1	1	1	1	.....	.....	.....
91.	Total	14.814	4	.....	.....	.....	1	.....	.....	1	.....	.....	1	.....	1	.....
	Males	20.000	3	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	1	.....
	Females	8.333	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
92.	Total	13.333	4	.....	.....	.....	.....	.....	2	1	.....	1	.....	.....	.....	.....
	Males	14.285	2	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....
	Females	12.500	2	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....
93.	Total	8.333	2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
	Males	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Females	15.384	2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....

94.	Total	4.166	1											1		
	Males	6.666	1											1		
	Females															
95.																
96.																
97.																
98.	Total	27.272	8						1	1	1					
	Males	50.000	8						1	1	1					
	Females															
99.	Total	44.444	4				1		1	1				1		
	Males	50.000	2				1			1						
	Females	40.000	2						1					1		
100.	Total	26.315	5					1	1		1	1	1			
	Males															
	Females	41.666	5					1	1		1	1	1			
101.	Total	50.000	1		1											
	Males	100.000	1		1											

* Population used was only that of counties and townships represented by returns of deaths in 1870. Disregarding the decimal point, the figures in this column represent the number of deaths in every 100,000 inhabitants of same sex and age.

TABLE VI.—CONTINUED.

Ages in Years.	Sex.	Per Cent of Deaths During the Year to Population June 1st, 1870, by Sex.*	Year 1870.	MONTHS. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
102.																
103.																
104.																
105.	Total	25.000	1										1			
	Males	50.000	1										1			
106.																
107.																
108.	Total	100.000	1												1	
	Males	†	1												1	

Unknown age.	Total	54.061	198	8	7	14	16	10	13	14	17	21	20	26	14	13
	Males.....	44.976	94	8	5	7	8	3	6	9	11	8	12	9	8	5
	Females ..	63.513	94	4	2	7	7	7	6	4	6	13	7	17	6	8
	Unknown.	--------	5	1	--------	--------	1	--------	1	1	--------	--------	1	--------	--------	--------

* Population used was only that of counties and townships represented by returns of deaths in 1870. Disregarding the decimal point, the figures in this column represent the number of deaths in every 100,000 inhabitants of same sex and age.

† No males in the population at this age, but one female. This man was enumerated in the Census, June 1st, 1870, as aged 109; he died in December 1870; age stated in registration returns as 108.

Tables V. and VI. and Exhibit C. are the first attempts, in this State at least, to ascertain the relative mortality in each month at the different ages. Nothing more is claimed than that the evidence, so far as it is exhibited, has been made as accurate as the returns would permit. The subject is believed to be one of great importance; its faithful study tending to furnish knowledge of the exact time of greatest danger at each age. This being once known, the exact conditions of climate, etc., existing at the given time can be ascertained; the observations of one year being verified or corrected by comparison one year with another. It appears to be an evident truth that an important step has been taken towards the removal of a cause detrimental to human life when its essential nature is known, and the exact amount of its influence appreciated.

This, however, is but a beginning of the subject in a general way with deaths from all causes. It should be continued in a manner to include a similar study of deaths from each important disease.

Table VI. also begins another subject,—the death-rate at every age,—which could not well be taken up until the results of the census had been obtained.

The population, June 1st, 1870, aged under one month, includes, if correct, only those born during the month of May, who have lived to the end of the month; while the number of deaths includes all who died at that age during the year.

According to the returns of births by the Supervisors, there were rather more than the average number born in May; but in the census the enumeration of those less than one month old, June 1st, 1870, was undoubtedly defective. This is apparent at once if the numbers aged under one month be compared with those aged one month and under two, two months and under three, etc., as shown in the census. It is also shown to be evidently wrong by the registration returns.

The whole number of births for May, 1870, according to the registration returns, was 2,275, and the number of deaths in

May of those aged under one month, was 58; 2,275—58=2,217, which is the number which should, according to these returns, be living, June 1st, 1870, aged under one month. Instead of this number, the census only shows, in the whole State, 248 living, and 43 dead, at that age. The population used in computing the per cent of deaths of those aged under one month, in Table VI., was the number living June 1st, 1870, less the number in counties and townships from which no returns of deaths in 1870 were received. The number stated in the census was undoubtedly too small, and should probably be multiplied by two. The average number of births per month for the year 1870, shown on page 3 of this report, was 2,221.91. The deaths of those aged under one month, computed to the number 2,222, is 43.789 per cent instead of 398.770, as appears in the table. It will, of course, be noticed that the population only includes those at the age stated at one particular time; for those aged under one year it is limited to one month; while the deaths were all which occurred during the year of twelve months. Another view of the subject is given in Exhibit D. The number of children living, as shown by the exhibit, will not include immigrants under one year of age, while the number of deaths should include the deaths among them.

EXHIBIT D.

By Sex, the Number of Children Born in Michigan during the year 1870; the Number of Deaths during the year at each age, by Months; the Number of Children left Living at each age, by Months; and the Per Cent of Deaths at each age, to Children Living to enter upon the same age.

AGE IN MONTHS.	No. of Children Born, and No. Living to enter upon each Age.				Number of Deaths at Each Age.				Per cent of Deaths at Each Age to all living to enter upon the same Age.			
	Total.	Males.	Females.	Unknown	Total.	Males.	Females.	Unknown	Total.	Males.	Females.	Unknown
Under one	26,663	13,846	12,726	91	973	546	400	27	3.649	3.943	3.143	29.670
One	25,690	13,300	12,326	64	249	140	106	3	.969	1.052	.859	4.687
Two	25,441	13,160	12,220	61	212	114	98	.....	.833	.866	.801	.....
Three	25,229	13,046	12,122	61	185	98	87	.....	.733	.751	.717	.....
Four	25,044	12,948	12,035	61	157	97	60	.....	.626	.749	.498	.....
Five	24,887	12,851	11,975	61	133	72	61	.....	.534	.560	.509	.....
Six	24,754	12,779	11,914	61	159	88	71	.....	.642	.688	.595	.....
Seven	24,595	12,691	11,843	61	106	68	38	.....	.430	.535	.320	.....
Eight	24,489	12,623	11,805	61	110	61	49	.....	.449	.483	.415	.....
Nine	24,379	12,562	11,756	61	121	62	59	.....	.496	.493	.501	.....
Ten	24,258	12,500	11,697	61	127	60	67	.....	.523	.480	.572	.....
Eleven	24,131	12,440	11,630	61	122	56	66	.....	.505	.450	.567	.....
No. arriving at one yr.	24,009	12,384	11,564	61	.....	.....	.....	.....	.....	.....	.....	.....

If Table VI. be examined, it will be seen that the death-rate appears to be particularly large at the ages immediately preceding and succeeding important ages, such as twenty, thirty, forty, etc.; while it is extremely small at those important ages. This disparity is not due to any such appearance in the returns of deaths, but undoubtedly results from a wrong showing of the population in the census. For instance,—according to the census returns,—the number of males in Michigan, June 1st, 1870, aged twenty-nine years, was 7,998, the number aged thirty was 13,784, while the number aged thirty-one was only 6,288. There does not appear to be the slightest probability that these figures correctly represent the facts in the case. There were probably nearly as many males in the State aged thirty-one as there were aged thirty; while if we believe the statement in the census there were not one-half as many. This undoubtedly resulted from carelessness on the part of the people, of the census marshals, or, as is probable in some cases, of both parties. It was less trouble to state the age as twenty, thirty, forty, and fifty, than it would have been to tell the exact truth and say twenty-nine, thirty-one, thirty-nine, forty-one, etc. This does not affect the death-rate materially if it be computed by periods of five or ten years each, because the inhabitants are all given, and only displaced as regards their proper ages. But it is a defect which seriously impairs the appearance of Table VII.,—a life table constructed for this State from combined results of the census and of the registration returns.

Besides the importance of mortality statistics as tending toward the prevention of deaths by increased knowledge of conditions causing them, one of their direct business relations is worth mentioning. Inasmuch as a very important business, involving millions of dollars as capital, and in which the people of this State are directly interested, and for which they annually pay out over a million of dollars, is based upon the death-rate,

it becomes a subject of some importance that this be correctly determined. Perhaps no other question connected with these statistics is of more immediate pecuniary importance than is this one of correctly determining the death-rate at the various ages. The other party to the contract in life insurance has in its own experience accurate means of determining this question. They can know positively that they collect all the deaths which occur among the number which they insure. They also know accurately the number insured. From this data they can construct life tables which for their purposes are extremely important and valuable; in fact without such knowledge they cannot successfully carry on their business. It would seem that the people should have the same interest in the business that the companies have; for they furnish the money which the life insurance companies manage and control. Each company keeps a well-paid actuary employed in its own interest, but very little has yet been done by the people for themselves. It is hoped that the labor devoted to the subject in this report may contribute somewhat in this direction. The tables have been constructed with as much care as if the material had been perfect, and it is hoped may help to create an interest that will tend towards the improvement of the methods and practice of its collection. By a table in the report of the Insurance Commissioner of this State, it appears that the people of Michigan paid, during the year 1870, one million six hundred and ninety thousand five hundred and seventy-seven dollars in premiums for life insurance; and this amount is being greatly increased every year. This may serve to indicate the importance to the people of accurate knowledge of the death-rate, upon which this business is based.

Another fact may be mentioned in illustration of the useful tendency of this kind of knowledge. In the report of the Medical Examiners of the Mutual Life Insurance Company of New York City for the year 1870, they state that, although the season was an unhealthy one, the losses of the Company were

"much below the expectation called for by the life tables." "The difference in favor of the Company was seven hundred and forty-eight thousand seven hundred and fifteen dollars and fifty-three cents." If the life tables now in general use by insurance companies show a death-rate so high that in an unhealthy year one company may accumulate over half a million of dollars in that manner, it appears quite probable that if sufficient attention be given to this subject the companies may be induced to believe that a lower rate of premiums, based upon a greater expectation of life, may be safely adopted; thereby saving to the people millions of dollars annually, besides placing life insurance within the reach of many who at present rates do not feel able to avail themselves of its benefits.

EXHIBIT E.—"AMERICAN EXPERIENCE TABLE."

"TABLE of Mortality, based on American Experience" (Laws of 1869, Act No. 77), to which is added a Column exhibiting the Expectation of Life, as that term is understood by the Compiler.

Age.	Numbers living.	Numbers dying.	Expectation of life.	* Expectation of life, in years and hundredths.	Age.	Numbers living.	Numbers dying.	Expectation of life.	* Expectation of life, in years and hundredths.	Age.	Numbers living.	Numbers dying.	Expectation of life.	* Expectation of life, in years and hundredths.
10	100,000	749	48.72	54.65	39	78,862	756	28.90	30.62	68	43,183	2,243	9.48	8.90
11	99,251	746	48.08	53.84	40	78,106	765	28.18	29.79	69	40,890	2,321	8.98	8.37
12	98,505	743	47.44	53.04	41	77,341	774	27.45	28.95	70	38,569	2,391	8.48	7.86
13	97,762	740	46.82	52.23	42	76,567	785	26.72	28.11	71	36,178	2,448	8.00	7.38
14	97,022	737	46.16	51.41	43	75,782	797	25.99	27.28	72	33,730	2,487	7.54	6.91
15	96,285	735	45.50	50.60	44	74,985	812	25.27	26.45	73	31,243	2,505	7.10	6.47
16	95,550	732	44.85	49.79	45	74,173	828	24.54	25.62	74	28,738	2,501	6.68	6.05
17	94,818	729	44.19	48.97	46	73,345	848	23.80	24.79	75	26,237	2,476	6.28	5.64
18	94,089	727	43.53	48.15	47	72,497	870	23.08	23.97	76	23,761	2,431	5.88	5.25
19	93,362	725	42.87	47.32	48	71,627	896	22.36	23.14	77	21,330	2,369	5.48	4.77
20	92,637	723	42.20	46.50	49	70,731	927	21.68	22.33	78	18,961	2,291	5.10	4.31
21	91,914	722	41.53	45.67	50	69,804	962	20.91	21.52	79	16,670	2,196	4.74	4.16
22	91,192	721	40.85	44.85	51	68,842	1,001	20.20	20.71	80	14,474	2,091	4.38	3.82

23	90,471	720	40.17	44.02	52	67,841	1,044	19.49	19.92	81	12,888	1,964	4.04	3.51
24	89,751	719	39.49	43.19	53	66,797	1,091	18.79	19.18	82	10,419	1,816	3.71	3.21
25	89,032	718	38.81	42.35	54	65,706	1,143	18.69	18.35	83	8,603	1,648	3.30	2.99
26	88,314	718	38.11	41.52	55	64,563	1,199	17.40	17.18	84	6,955	1,470	3.08	2.64
27	87,596	718	37.43	40.69	56	63,364	1,260	16.72	16.82	85	5,485	1,292	2.77	2.36
28	86,878	718	36.73	39.85	57	62,104	1,325	16.05	16.07	86	4,193	1,114	2.47	2.06
29	86,160	719	36.03	39.02	58	60,779	1,394	15.39	15.34	87	3,079	933	2.19	1.81
30	85,441	720	35.33	38.18	59	59,385	1,468	14.74	14.61	88	2,146	744	1.93	1.59
31	84,721	721	34.62	37.34	60	57,917	1,546	14.09	13.91	89	1,402	555	1.69	1.37
32	84,000	723	33.92	36.50	61	56,371	1,628	13.47	13.22	90	847	385	1.42	1.15
33	83,277	726	33.21	35.66	62	54,743	1,713	12.86	12.54	91	462	246	1.19	.93
34	82,551	729	32.50	34.82	63	53,030	1,800	12.26	11.88	92	216	137	.98	.78
35	81,822	732	31.78	33.99	64	51,230	1,889	11.68	11.25	93	79	58	.80	.68
36	81,090	737	31.07	33.14	65	49,341	1,980	11.10	10.63	94	21	18	.64	.58
37	80,353	742	30.35	32.30	66	47,361	2,070	10.54	10.03	95	3	3	.50	.50
38	79,611	749	29.62	31.46	67	45,291	2,158	10.00	9.45	------	----------	----------	----------	----------

* Column added to the original table; computed by the Compiler.

TABLE VII.

Life Table, for Males, constructed upon the basis of the Death-Rate in Michigan during the Year 1870, calculated upon the assumed number of 119,949 males born, showing for each age from 1 to 112, the Average Years of Life,—the Expectation of Life, so called,—computed by the method employed for the Carlyle Table, the American Experience Table, etc.; and also the True Expectation of Life at the same ages, computed by a new method.

Age in Years.	Death-Rate.	Number Living at beginning of each year of Age.	Number Dying at each Age.	Average Years of Life at each Age.*	True Expectation of Life, at each Age, in Years and 100ths.†	Age in Years.	Death-Rate.	Number Living at beginning of each year of Age.	Number Dying at each Age.	Average Years of Life at each Age.*	True Expectation of Life, at each Age, in Years and 100ths.†
-1..	9.095	119,949	10,909	59.28	71.09	19	.508	97,770	497	53.04	56.38
1..	3.057	109,040	3,333	64.18	71.98	20	.367	97,273	357	52.31	55.50
2..	1.491	105,707	1,576	65.19	71.68	21	.576	96,916	558	51.50	54.58
3..	1.159	104,131	1,207	65.17	71.01	22	.381	96,358	367	50.79	53.72
4..	.743	102,924	765	64.98	70.26	23	.412	95,991	395	49.99	52.80
5..	.671	102,159	685	64.41	69.42	24	.342	95,596	327	49.19	51.90
6..	.479	101,474	486	63.84	68.56	25	.290	95,269	276	48.36	50.97
7..	.333	100,988	336	63.15	67.71	26	.367	94,993	349	47.50	50.03
8..	.358	100,652	360	62.36	66.73	27	.369	94,644	349	46.67	49.10
9..	.291	100,292	292	61.58	65.81	28	.325	94,295	306	45.84	48.16
10..	.280	100,000	280	60.76	64.87	29	.426	93,989	400	44.99	47.22
11..	.226	99,720	225	59.93	63.93	30	.226	93,589	212	44.18	46.30
12..	.253	99,495	252	59.06	62.98	31	.510	93,377	476	43.32	45.34
13..	.221	99,243	219	58.21	62.03	32	.331	92,901	308	42.50	44.43
14..	.219	99,024	217	57.34	61.08	33	.443	92,593	410	41.46	43.49
15..	.283	98,807	280	56.46	60.14	34	.388	92,183	352	40.82	42.56
16..	.235	98,577	232	55.59	59.19	35	.329	91,831	302	39.97	41.63
17..	.330	98,345	325	54.72	58.25	36	.328	91,529	300	39.10	40.69
18..	.255	98,020	250	53.90	57.32	37	.363	91,229	331	38.23	39.74

* Heretofore incorrectly termed "Expectation of Life." † By Dr. Baker's method, explained in the remarks following. See page 181.

TABLE VII.—CONTINUED.

Age in Years.	Death-Rate.	Number Living at beginning of each year of Age.	Number Dying at each Age.	Average years of Life at each Age.*	True Expectation of Life, at each Age, in Years and 100ths.†	Age in Years.	Death-Rate.	Number Living at beginning of each year of Age.	Number Dying at each Age.	Average Years of Life at each Age.*	True Expectation of Life at each Age, in Years and 100ths.†
38..	.507	90,898	461	37.37	38.81	67	2.719	66,586	1,810	15.43	14.08
39..	.399	90,437	361	36.56	37.89	68	1.762	64,776	1,141	14.84	13.32
40..	.322	90,076	290	35.70	36.96	69	2.748	63,635	1,747	14.10	12.48
41..	.513	89,786	461	34.81	36.01	70	2.654	61,888	1,643	13.48	11.72
42..	.538	89,325	481	33.99	35.09	71	4.568	60,245	2,752	12.84	10.95
43..	.735	88,844	653	33.17	34.17	72	5.274	57,493	3,032	12.43	10.52
44..	.751	88,191	662	32.42	33.28	73	4.332	54,461	2,359	12.09	10.22
45..	.413	87,529	361	31.66	32.39	74	4.608	52,102	2,401	11.62	9.86
46..	.669	87,168	583	30.79	31.45	75	4.246	49,701	2,110	11.16	9.41
47..	.535	86,585	463	29.99	30.55	76	5.545	47,591	2,639	10.68	8.86
48..	.567	86,122	488	29.15	29.63	77	6.609	44,952	2,971	10.22	8.95
49..	.800	85,634	685	28.31	28.71	78	4.684	41,981	1,966	9.91	8.82
50..	.585	84,949	497	27.54	27.83	79	8.965	40,015	3,587	9.38	8.18
51..	.855	84,452	722	26.69	26.91	80	7.804	36,428	2,843	9.25	7.69
52..	.928	83,730	777	25.92	26.05	81	10.828	33,585	3,637	8.99	7.39
53..	.874	82,953	725	25.16	25.25	82	7.692	29,948	2,304	9.02	7.85
54..	1.020	82,228	838	24.38	24.44	83	6.629	27,644	1,833	8.73	7.52
55..	1.026	81,389	835	23.62	23.65	84	9.042	25,811	2,334	8.32	7.38
56..	1.076	80,554	867	22.86	22.86	85	4.458	23,477	1,047	8.10	6.75
57..	1.988	79,687	1,582	22.11	22.04	86	7.777	22,430	1,744	7.45	6.09
58..	1.456	78,105	1,137	21.54	21.26	87	17.283	20,686	3,575	7.04	5.69
59..	1.271	76,968	978	20.85	20.42	88	4.687	17,111	802	7.41	6.02
60..	.877	75,990	666	20.12	19.56	89	9.523	16,309	1,553	6.75	5.37
61..	1.900	75,324	1,431	19.29	18.65	90	12.108	14,756	1,787	6.40	5.04
62..	2.378	73,893	1,757	18.65	17.85	91	12.477	12,969	1,618	6.21	4.91
63..	1.527	72,136	1,102	18.10	17.12	92	12.846	11,351	1,458	6.03	4.79
64..	1.940	71,034	1,378	17.37	16.32	93	13.215	9,893	1,307	5.84	4.70
65..	2.113	69,656	1,472	16.70	15.56	94	13.584	8,586	1,166	5.65	4.42
66..	2.343	68,184	1,598	16.05	14.82	95	13.953	7,420	1,035	5.46	4.60

* Heretofore incorrectly termed "Expectation of Life." † By Dr. Baker's method, explained in the remarks following. See page 181.

TABLE VII.—CONTINUED.

Age in Years.	Death-Rate.	Number Living at beginning of each year of Age.	Number Dying at each Age.	Average years of Life at each Age. *	True Expectation of Life, at each Age, in Years and 100ths. †	Age in Years.	Death-Rate.	Number Living at beginning of each year of Age.	Number Dying at each Age.	Average Years of Life at each Age. *	True Expectation of Life, at each Age, in Years and 100ths. †
96..	14.000	6,885	894	5.27	4 58	105	32.141	1,293	416	2.00	1.69
97..	14.047	5,491	771	5.05	4.57	106	38.093	877	334	1.72	1.43
98..	14.094	4,720	665	4.79	4.55	107	44.045	543	239	1.47	1.21
99..	14.141	4,055	573	4.50	4.38	108	50.000	304	152	1.24	1.00
100.	14.188	3,482	494	4.15	4.02	109	62.500	152	95	.98	.80
101.	14.235	2,988	425	3.76	3.56	110	75.000	57	42	.78	.66
102.	14.235	2,563	366	3.30	3.02	111	87.500	14	12	.64	.58
103.	20.287	2,197	445	2.77	2.46	112	100.000	2	2	.50	.50
104.	26.189	1,752	459	2.35	2.00						

* Heretofore incorrectly termed "Expectation of Life." † By Dr. Baker's method, explained in the remarks following. See page 181.

Table VII. applies to males only; the death-rate of females by ages is not the same. Like the other tables, it has been constructed from the material embraced in the returns, combined with that obtained from the census, without any equivocation, graduation, or material change in the returns or statements in the census, except that for all ages over ninety the number of deaths in the State was so small that the death-rate was equalized, by obtaining the actual average death-rate by periods of age, and distributing it over those ages at which no deaths occurred; in accordance with the increasing rate found by comparing each period with the one including the next older ages. This was the only change from the direct showing of the returns of deaths in this report, and of the population by the census. It is not claimed that the table represents the whole truth, but it is believed to be nearer the truth, concerning residents of this State, than any other table previously published, none having been constructed before from

any statement of mortality in this State. The death-rate used is undoubtedly too small, but, on the other hand, it may not be as much too small as tables of other localities have been too large for our healthful State. For the purpose of allowing comparisons to be made, the "American Experience Table," as it is called, is also exhibited, with a column added showing the true expectation of life, as computed by the method devised by the compiler.

There appears to be an impression among intelligent men, who apparently have not given the subject close attention, that from the total death-rate alone can be determined the length of a generation. The reasoning is believed to be something nearly as follows: If the death-rate is one per cent annually, then it is supposed the population will last just one hundred years. An average between the extreme limits of age would give fifty years as the average length of a generation. Or suppose the annual death-rate to be 1.50 per cent, then a given number, it is presumed, will last just 66⅔ years; and an average between birth and this oldest age would give 33⅓ years as the average length of a generation. But the estimation of the average length of a generation is a problem which cannot be solved in so simple a manner. The principal fallacy in the above method appears to be that it does not take into the account the fact that the death-rate is very different at different ages; and our population is not what is termed a fixed one,—that is, one where an equal number are born and die each year, and where no disturbance occurs in the relative number at each age because of immigration or emigration. It will be readily seen that in a population made up entirely of young people in the prime of life, whose death-rate is extremely low, an exceedingly long-lived generation would be inferred by the above method of reckoning, without any real evidence having been given. On the other hand, if the population chanced to be composed of infants, or of old people, whose death-rate is large, the length of a generation, estimated by

the simple method above, would appear to be too short. If of old people alone, the want of harmony between the result of the reasoning and the observed age of the inhabitants must, of course, be manifest.

The average age of all who die, or of all the inhabitants of the State, does not necessarily furnish any accurate idea of the length of a generation, unless, as is probably not the case in any State, the population is a fixed one, such as is being just maintained by the same number of births and deaths each year.

No accurate statement of the length of a generation can be made without a knowledge of the death-rate at every age; and then, not until an imaginary stationary population has been computed, such as would be maintained by a fixed number of births annually. This is done by assuming any convenient number of annual births, which should, however, be sufficient to last until the oldest age at which any are living in the population, say 100,000. From this number, subtract the number which would die out of that number before their first birthday, according to the death-rate in the State, previously determined by computing the per cent of deaths to population. This will leave the number at the beginning of age one. From this, subtract the number which would die before reaching the age of two years, according to the death-rate, and continue the process until the oldest age at which deaths are known to occur. See Table VII.

The constant population which will be maintained by the stated number of annual births may be found by adding together the numbers living at each age. See page 183.

The average number of years which all born live, is found by multiplying the number living at each age by the number of years which they have lived (including one-half year for each person, because not all the deaths occur on the birthdays, but, for this purpose, are presumed to be equally distributed throughout the year), and adding together the several results

to obtain the aggregate number of years lived; and then dividing this number of years by the whole number of persons born. The aggregate number of years lived after a given age, divided by the number of persons living at that age, will give the average years of life which all at that age will live. This has heretofore been called the "Expectation of Life;" but I shall endeavor to show that it cannot properly be so called; that the true Expectation of Life is something quite different.

The per cent of deaths to the population at each age furnishes a statement of the average chances of death at each age. If the per cent of deaths to living, during the first year of life, is ten, then the chances are, on an average, ninety in a hundred that a child will live through that age; there are nine times as many chances of living as there are of dying. If at the age of fifteen the death-rate is only one-fourth of one per cent, then the chances of living are, on an average, 399 times as great as the chance of dying at that age, which is only one in four hundred. If, again, at the age of 112 it be found that all die,—that the death-rate is 100 per cent,—then all the chances are in favor of death; and if we suppose the death-rate to be uniform throughout the year, we would say that out of a number at that age some would die all the way along to the end of the year, and one's chance would be equal to live to the middle of the year; some would die before and some after that. This is the manner in which all "Life Tables" have been closed up at the oldest age fixed upon in each; for the limit of life has not been always stated the same in all of them; most life tables, however, fix it at the age of ninety-five years. Although this expectation at the oldest age may be properly computed on this principle, so long as the death-rate is believed to be uniform throughout the year, the same method has inappropriately been adopted at all ages. It has always been assumed that the average number of years which all would live was the expectation of life; but this could only be true where, in a stationary population, the death-rate was such a gradually increasing one

that the same *number* of persons died at every age. As is now well known, the death-rate is quite different from this in every locality where it has been determined.

In Webster's Dictionary it is said that "Expectation is founded upon some reasons which render the event probable." Now, although the average number of years which a given number of persons will live may be accurately stated, from this knowledge alone the probabilities of any one of them attaining that age cannot be accurately estimated. At many ages there are reasons which render it extremely probable that the average number of years of life will not be reached by any given individual; and at many other ages there are good reasons for believing that any given individual may expect to live much longer than the average number of years. As this appears to be something new, and in contradiction to the established method and the old authorities, it seems proper to devote sufficient space to the subject to demonstrate the truth of these propositions. All "Life Tables" assume that one person's chance is as good as any other person's. In Life Insurance Companies some are rejected, but all who are accepted are counted as average risks at the given age. It seems plain that if of any given number of persons one-half will die within a given time, then assuming that at the beginning one's chance of living is as good as every other's, the probabilities of one's living to the end of that time just equal those that he will die before; if any less than one-half of the number die, then the chance of living to the end of the time is better than the chance of dying before, in proportion as the number dying is less than one-half. If none ever die, there is no chance of dying, but a certainty of living. On the other hand, if more than one-half of the number die before reaching a given time, then there are more chances of dying than of living. The following formulæ are believed to express the facts concerning the subject:

The fraction formed by using the whole number living at the

beginning of a given period of time for a denominator, and the number dying during the period for a numerator, will express the chances or probabilities of death during the given period of time. The fraction formed by using the whole number at the beginning for a denominator, and the number living at the end of the period for a numerator, expresses the chances or probabilities of living to the end of the given period. In other words, these fractions express, mathematically, the expectation of life or of death, as the case may be, during a given time specified. To find the time of expectation, when not specified,—as one person's chances are supposed to be as good as every other person's,—we have only to ascertain the time when neither the expectation of life exceeds that of death, or the expectation of death exceeds that of life. In other words, find the time which will elapse before one-half the number living shall have died, and, in the opinion of the compiler, we have the average expectation of life expressed in terms of time. In Table VII., and in one column of Exhibit E., the expectation is expressed in years and hundredths. The method by which it was obtained at each age was simply, as indicated above, to *ascertain the age at which one-half the number living, at the given age, will have died, and subtract the given age.*

In the "American Experience Table," which is embodied in the insurance laws of this State, as a standard, the expectation of life, at the age of ten years, is stated to be 48.72 years; but of the 100,000 living at the age of ten, according to the death-rate therein stated, one-half would not have died until the age of 64.65 years. Subtracting the number of years already lived from this age, would leave 54.65 years as the true expectation of life, computed by the method here adopted. Now, although, according to the death-rate adopted in this table, the average number of years which all aged ten will live is 48.72, out of 100,000 aged ten, any given person would still have, at the age of 58.72, 8,328 more chances to live than to die, as will be seen by applying the formula given above. The fraction formed by

using the whole number at the beginning for a denominator, and the number dead for a numerator, would be $\frac{41,672}{100,000}$. This represents the probability of dying before or at that time, while the probabilities of living are 58,328÷100,000. In the Life Table given on page 524, "Mortality and Miscellaneous Statistics," United States, 1860, the "Expectation of Life" at birth is stated to be 43.06 years; but at the age of 43.06 there are still living, out of 100,000 born, 51,962, or 1,962 more than one-half; consequently, there are still remaining that number of chances out of the 100,000, before reaching the age where the chances for death are as great as the chances for living. The true expectation, computed by my method, would be 46.03, instead of 43.06, as stated. In other words, according to the statement of the rate of mortality there given for the United States in 1860, one born in the United States may at birth reasonably expect to reach the age of 46.03 years.

EXHIBIT F.

Of 1,000,000 born, the Number of Survivors at the ages of Twenty, Forty, and Sixty years, in various Foreign Countries; and of the same Number of Males born in Michigan, the Number of Survivors at the same Ages.

At Ages.	Sweden.	England.	France.	Holland.	Belgium.	Austria	Ireland.	Mich. Males.
20	669,800	662,756	629,901	609,020	534,500	521,300	501,500	810,920
40	567,000	538,584	464,869	489,840	408,890	--------	396,200	750,952
60	384,900	367,827	205,006	311,730	272,420	--------	189,500	633,519

The first eight columns of Exhibit F, are taken from an article in pamphlet form entitled "Immigration," by Dr. Edward Jarvis. The last column is computed from Table VII. of this report. Here, again, it must be acknowledged that the

deaths in this State are probably not all collected. But it seems also probable that the collection of such statistics in the other countries is not absolutely perfect, although far more so than in this State.

The number of births of males returned as having occurred in Michigan during the year 1870, was 13,846. This number of births annually would, according to the evidence in Table VII., maintain a male population as follows: Aged twenty, 11,229; aged forty, 10,398; aged sixty, 8,021; and a constant total population of 828,043. The number of males living in Michigan June 1st, 1870, in counties represented by births in 1870, according to the United States census as compiled in this State Department, was 603,655. The number at the age of twenty was 11,959; at forty, 11,177; at sixty, 4,330; but no reliance can be placed upon these numbers at specified ages, because of error in collection, pointed out on page 169; the number being too large at these even ages.

According to the article above quoted, "One million births in each year, through several generations, will support a constant population in England, 40,858,204; in France, 34,938,543; in Ireland, 22,505,101." According to the death-rate of males in Michigan for 1870, as shown in Table VII., one million births in each year will support in this State a constant male population of 59,803,792. No life table having yet been constructed for females, it is not possible to say whether or not this would be near the true statement for the total inhabitants.

TABLE IX.

Deaths in Michigan, during the year 1870, of those aged One Hundred Years and Over; exhibiting all the details concerning them included in the returns.

NAME.	Sex.	Color.	Married, Single, or Widowed	Birthplace.	Age.			Occupation.	Place of Death.		Date of Death.		Cause of Death.
					Yrs	Mos.	Days		Town.	County.	Month.	Day.	
Hamilton Gaines.	Male...	White..	Widower.	Ireland.....	105	11	22	Distiller 40 yrs. then farmer.	Union City....	Branch.....	October....	27	Old age.
Unknown	Female.	Indian.	Widow...	Red River..	100	*a*	*a*	None	Sugar Island...	Chippewa..	June.....	*b*	Old age.
Betsey Rogers....	Female.	White..	Widow...	Conn'ticut.	100	8	10	Not stated.....	Stockbridge....	Ingham	September.	5	Old age.
Elizabeth Duly...	Female.	White..	Widow...	Maryland..	100	0	0	Not stated.....	Algoma.....	Kent.....	August.....	31	Old age.
Elizalat Sheffield.	Female.	White..	Widow...	Ireland.....	100	*b*	*b*	Not stated.....	Ogden.....	Lenawee....	May.....	11	Old age.
Mary Laloy.....	Female.	White..	Widow...	Canada.....	100	*c*	*c*	Not stated.....	Clinton	Macomb....	October....	10	Old age.
Sylvester Hunt...	Male...	White..	Widower.	Unknown..	108	*b*	*b*	Farmer	Porter.....	Van Buren.	December..	12	Old age.
William Schooley	Male...	White..	Widower.	New Jersey	101	8	5	Farmer	Ypsilanti	Washtenaw	February ..	15	Old age.

a Returned as one hundred and over.
b Not stated.
c "One hundred, about."

Table IX. seems to demonstrate the fact that no life table is applicable to this State in which all, of either sex, are supposed to die at or before the age of ninety-five, as in the "American Experience Table."

TABLE VIII.

Exhibiting for the State and Counties, by Sex, the Number of Deaths in Michigan During the Year 1870, and in each Month of the Year; and also the Number of Deaths at each Period of Age.

State and Counties.	Sex.	Year 1870.	Months.													Ages.											
			January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Unknown.
State	Totals	10,766	421	558	724	678	689	754	1084	1478	1363	1132	933	927	35	4585	687	359	472	974	787	608	647	676	607	271	198
	Males	5,589	225	322	372	329	348	388	573	761	708	594	483	477	14	2501	307	169	182	419	295	324	404	394	352	148	94
	Females	5,140	195	229	350	347	339	369	506	707	651	532	448	449	18	2054	330	190	290	555	441	284	243	281	255	123	94
	Unk'n	37	1	2	2	2	2	2	5	5	4	6	2	1	3	30	----	----	----	----	1	----	----	1	----	----	5
Alcona	Totals	6	----	----	----	1	----	1	1	1	2	----	----	----	----	4	----	----	----	----	----	----	1	----	----	----	1
	Males	2	----	----	----	----	----	----	----	----	2	----	----	----	----	----	----	----	----	----	----	----	1	----	----	----	1
	Females	4	----	----	----	1	----	1	1	1	----	----	----	----	----	4	----	----	----	----	----	----	----	----	----	----	----
Allegan	Totals	260	10	11	10	21	12	17	24	35	34	34	23	28	1	102	13	8	9	37	13	14	18	19	16	4	7
	Males	134	6	6	6	9	6	9	9	22	19	16	11	14	1	60	8	1	6	11	6	4	12	13	6	3	4
	Females	125	4	5	4	12	6	8	14	13	15	18	12	14	----	42	5	7	3	26	7	10	6	6	10	1	2
	Unk'n	1	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1

TABLE VIII.—CONTINUED.

COUNTIES.	SEX.	Year 1870.	Months.													Ages.											
			January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Unknown.
Alpena *a*	----------	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Antrim	Totals	12	----	1	----	----	2	2	----	4	1	2	----	----	----	8	----	1	----	----	----	1	----	----	2	----	----
	Males	8	----	1	----	----	2	----	----	3	1	1	----	----	----	6	----	----	----	----	----	----	----	----	2	----	----
	Females	4	----	----	----	----	----	2	----	1	----	1	----	----	----	2	----	1	----	----	----	1	----	----	----	----	----
Barry	Totals	180	4	7	15	12	7	12	13	29	19	25	16	21	----	63	10	7	5	16	12	16	14	12	16	4	5
	Males	100	3	4	9	7	5	7	8	14	11	14	9	9	----	48	4	5	----	6	4	5	6	7	9	3	3
	Females	79	1	3	6	5	2	5	5	15	8	11	6	12	----	14	6	2	5	10	8	11	8	5	7	1	2
	Unkno'n	1	----	----	----	----	----	----	----	----	----	----	1	----	----	1	----	----	----	----	----	----	----	----	----	----	----
Bay	Totals	155	3	2	10	9	8	13	20	21	13	19	15	22	----	95	11	3	4	19	6	5	5	1	5	1	----
	Males	84	1	1	5	4	4	6	12	12	8	14	5	12	----	47	6	2	2	13	5	2	4	----	3	----	----
	Females	71	2	1	5	5	4	7	8	9	5	5	10	10	----	48	5	1	2	6	1	3	1	1	2	1	----

Benzie	Totals	23	----	1	1	1	----	4	----	8	5	1	2	----	----	12	----	----	----	6	1	----	2	1	1	----	----
	Males	13	----	1	----	1	----	2	----	6	1	1	1	----	----	6	----	----	----	4	----	----	2	1	----	----	----
	Females	10	----	----	1	----	----	2	----	2	4	----	1	----	----	6	----	----	----	2	1	----	----	----	1	----	----
Berrien	Totals	276	4	12	21	12	9	23	21	47	52	37	19	18	1	122	13	8	10	30	17	15	20	18	16	5	2
	Males	144	1	8	11	5	7	13	10	27	30	15	9	8	----	66	5	4	2	11	9	11	12	12	7	4	1
	Females	132	3	4	10	7	2	10	11	20	22	22	10	10	1	56	8	4	8	19	8	4	8	6	9	1	1
Branch	Totals	226	14	11	16	12	16	11	18	27	32	35	12	22	----	74	12	6	10	21	18	15	20	22	18	5	5
	Males	113	6	5	7	5	5	5	10	15	16	20	7	12	----	40	11	3	3	9	6	5	11	10	10	3	2
	Females	113	8	6	9	7	11	6	8	12	16	15	5	10	----	34	1	3	7	12	12	10	9	12	8	2	3
Calhoun *b*	Totals	414	12	19	24	31	31	31	54	61	38	40	47	25	1	162	40	19	18	33	24	21	30	30	22	9	6
	Males	214	6	11	12	12	17	18	29	25	24	24	23	13	----	98	20	7	6	12	10	11	15	16	15	5	4
	Females	197	6	8	12	19	14	13	25	34	14	15	24	12	1	66	20	12	12	21	14	10	15	14	7	4	2
	Unkno'n	3	----	----	----	----	----	----	----	2	----	1	----	----	----	3	----	----	----	----	----	----	----	----	----	----	----
Cass	Totals	220	9	15	23	16	11	11	22	28	24	25	20	16	----	78	13	14	18	12	10	15	14	21	12	12	1
	Males	118	7	11	11	7	4	5	10	13	17	13	13	7	----	48	6	9	8	5	3	7	7	12	8	4	1
	Females	101	2	4	12	9	7	6	12	15	7	11	7	9	----	29	7	5	10	7	7	8	7	9	4	8	----
	Unkno'n	1	----	----	----	----	----	----	----	----	----	1	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----

a No returns of deaths. *b* No returns of deaths from township of Battle Creek.

TABLE VIII.—CONTINUED.

COUNTIES.	SEX.	Year 1870.	MONTHS. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	AGES. Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Unknown.
Charlevoix	Totals	15	----	----	1	2	----	2	1	2	4	----	3	----	----	9	----	1	1	----	2	----	2	----	----	----	----
	Males	10	----	----	1	1	----	1	1	----	3	----	3	----	----	6	----	1	----	----	1	----	2	----	----	----	----
	Females	5	----	----	----	1	----	1	----	2	1	----	----	----	----	3	----	----	1	----	1	----	----	----	----	----	----
Cheboygan *a*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Chippewa	Totals	29	----	1	1	3	4	3	----	4	3	1	2	7	----	16	3	1	1	1	----	----	----	2	1	1	3
	Males	10	----	1	----	1	1	1	----	1	1	1	1	2	----	7	----	1	----	----	----	----	----	2	----	----	----
	Females	19	----	----	1	2	3	2	----	3	2	----	1	5	----	9	3	----	1	1	----	----	----	----	1	1	3
Clare *a*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Clinton	Totals	241	11	22	20	24	14	8	6	35	36	22	20	22	1	84	13	12	14	33	16	10	13	20	17	7	2
	Males	117	3	13	8	11	7	5	3	18	17	9	9	13	1	44	4	7	7	10	7	3	10	10	10	5	----
	Females	123	8	9	12	13	7	3	3	17	19	12	11	9	----	40	9	5	7	23	9	7	3	10	7	2	1
	Unkno'n	1	----	----	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1

Delta. *b*	Totals	39	....	2	3	2	4	3	5	6	4	2	6	2	....	23	1	....	3	5	3	1	1	2	....	....	....
	Males	19	....	1	3	1	1	3	2	4	1	....	2	1	....	14	1	....	....	2	1	....	1	....	....	....	....
	Females	20	....	1	....	1	3	....	3	2	3	2	4	1	....	9	....	....	3	3	2	1	....	2	....	....	....
Eaton	Totals	205	11	11	17	20	15	9	11	25	21	31	17	17	....	74	8	9	16	25	14	10	14	16	11	7	1
	Males	93	6	6	4	6	6	3	6	20	8	13	7	8	....	32	2	4	7	8	6	5	7	9	8	4	1
	Females	112	5	5	13	14	9	6	5	5	13	18	10	9	....	42	6	5	9	17	8	5	7	7	3	3	....
Emmet	Totals	44	1	1	2	2	2	2	1	8	11	6	5	3	....	34	2	1	2	2	1	....	1	1	....	....	....
	Males	25	1	....	....	1	2	2	....	5	6	5	3	....	....	22	1	1	....	1	....	....	....	....	....	....	....
	Females	19	....	1	2	1	....	....	1	3	5	1	2	3	....	12	1	....	2	1	1	....	1	1	....	....	....
Genesee	Totals	242	12	17	12	20	22	14	15	30	35	24	18	23	....	99	4	6	4	20	20	18	19	19	21	9	3
	Males	113	5	9	3	6	12	6	10	16	17	11	10	8	....	43	3	2	2	8	7	7	9	12	13	5	2
	Females	128	7	8	9	14	10	8	5	14	17	13	8	15	....	55	1	4	2	12	13	11	10	7	8	4	1
	Unkno'n.	1	....	....	....	....	....	....	....	....	1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
Gd. Traverse	Totals	28	....	1	1	3	2	....	3	4	3	6	3	2	....	12	1	2	1	3	....	3	2	2	....	1	1
	Males	21	....	....	1	2	2	....	2	2	3	5	3	1	....	8	1	2	....	3	....	2	2	1	....	1	1
	Females	7	....	1	....	1	....	....	1	2	....	1	....	1	....	4	....	....	1	....	....	1	....	1	....	....	....

a No returns of deaths. *b* No returns of deaths from townships of Delton and Masonville.

TABLE VIII.—CONTINUED.

COUNTIES.	SEX.	Year 1870.	MONTHS. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	AGES. Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Unknown.
Gratiot	Totals	116	6	5	5	10	7	11	12	14	21	11	8	6	----	50	4	10	9	13	4	7	6	5	5	3	----
	Males	55	4	1	3	3	2	6	8	2	9	8	4	5	----	24	1	3	5	6	1	4	4	3	2	2	----
	Females	61	2	4	2	7	5	5	4	12	12	3	4	1	----	26	3	7	4	7	3	3	2	2	3	1	----
Hillsdale	Totals	270	8	5	19	9	21	18	23	31	35	37	32	30	2	68	13	9	19	33	23	23	28	14	25	7	3
	Males	135	4	4	7	4	10	10	11	18	13	20	16	17	1	45	6	4	6	17	7	8	17	7	13	4	1
	Females	134	4	1	12	5	10	8	12	13	22	17	16	13	1	22	7	5	13	21	16	15	11	7	12	3	2
	Unkno'n.	1	----	----	----	----	1	----	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----
Houghton *a*	----------	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Huron	Totals	64	7	3	8	5	4	7	4	6	7	7	1	5	----	28	3	2	3	8	4	5	5	1	4	1	----
	Males	29	2	1	1	2	3	2	2	5	4	2	1	4	----	16	1	----	----	4	----	2	3	----	2	1	----
	Females	35	5	2	7	3	1	5	2	1	3	5	----	1	----	12	2	2	3	4	4	3	2	1	2	----	----

Ingham	Totals	230	9	29	12	18	12	9	25	24	31	27	19	15	----	85	15	5	8	21	24	15	13	18	16	8	2
	Males	123	5	18	9	8	6	5	16	16	15	12	7	6	----	46	7	4	4	12	11	7	8	13	6	4	1
	Females	107	4	11	3	10	6	4	9	8	16	15	12	9	----	39	8	1	4	9	13	8	5	5	10	4	1
Ionia	Totals	271	8	19	30	19	19	23	23	24	31	29	25	21	----	111	26	10	14	29	22	10	11	9	17	4	8
	Males	129	4	12	16	10	13	8	10	10	13	10	11	12	----	55	17	5	3	9	5	6	6	8	12	2	1
	Females	137	4	7	14	9	6	14	13	12	18	17	14	9	----	52	9	5	11	20	17	4	5	1	5	2	6
	Unkno'n	5	----	----	----	----	----	1	----	2	----	2	----	----	----	4	----	----	----	----	----	----	----	----	----	----	1
Iosco	Totals	26	----	1	----	3	3	3	2	5	5	2	1	1	----	12	1	----	----	5	3	3	1	----	----	----	1
	Males	13	----	1	----	1	1	3	1	2	3	----	----	1	----	6	----	----	----	2	1	3	----	----	----	----	1
	Females	13	----	----	----	2	2	----	1	3	2	2	1	----	----	6	1	----	----	3	2	----	1	----	----	----	----
Isabella	Totals	31	1	1	2	3	1	3	2	6	----	6	4	2	----	19	2	1	----	2	1	1	3	2	----	----	----
	Males	12	1	----	2	2	1	1	1	1	----	1	2	----	----	10	1	----	----	----	----	----	1	----	----	----	----
	Females	19	----	1	----	1	----	2	1	5	----	5	2	2	----	9	1	1	----	2	1	1	2	2	----	----	----
Jackson	Totals	287	14	18	20	22	28	15	30	32	40	29	18	21	----	101	28	11	16	19	17	21	15	26	20	7	6
	Males	163	7	11	9	15	14	12	18	16	23	17	11	10	----	64	9	6	7	10	6	11	13	18	12	3	4
	Females	124	7	7	11	7	14	3	12	16	17	12	7	11	----	37	19	5	9	9	11	10	2	8	8	4	2

a No returns of deaths.

TABLE VIII.—CONTINUED.

COUNTIES.	SEX.	Year 1870.	Months.													Ages.											
			January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Unknown.
Kalamazoo	Totals	307	29	21	17	11	23	21	23	42	47	31	19	28	....	93	15	14	11	29	37	24	17	32	20	10	5
	Males	157	16	14	8	6	11	8	13	18	23	14	11	15	....	53	7	5	4	12	14	13	11	20	10	7	1
	Females	148	13	6	9	5	12	13	10	24	23	17	8	8	....	38	8	9	7	17	23	11	6	12	10	3	4
	Unkno'n.	2	....	1	....	....	....	....	....	....	1	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....
Kalkaska	Totals	3	....	....	....	1	....	....	....	....	1	....	1	....	....	....	1	....	....	1	....	....	....	....	....	1	....
	Males	2	....	....	....	....	....	....	....	....	1	....	1	....	....	....	....	....	....	1	....	....	....	....	....	1	....
	Females	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
Kent	Totals	513	13	36	36	38	39	33	42	73	74	46	42	39	2	220	35	21	19	40	37	27	27	27	29	18	13
	Males	265	9	21	20	22	18	16	22	34	30	24	24	24	1	119	16	11	9	16	11	15	21	14	20	8	5
	Females	247	4	15	16	16	21	17	20	39	44	21	18	15	1	101	19	10	10	24	26	12	6	12	9	10	8
	Unkno'n.	1	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....

Lake	Totals	4	----	----	----	----	1	1	----	----	----	1	1	----	----	----	----	----	----	1	1	1	1	----	----	----	----
	Females	4	----	----	----	----	1	1	----	----	----	1	1	----	----	----	----	----	----	1	1	1	1	----	----	----	----
Lapeer	Totals	149	3	12	12	18	11	14	7	18	19	12	12	9	2	63	10	7	6	12	11	7	6	10	7	5	5
	Males	81	2	7	5	11	4	9	4	9	11	8	5	5	1	31	5	5	2	8	3	6	5	8	4	2	2
	Females	68	1	5	7	7	7	5	3	9	8	4	7	4	1	32	5	2	4	4	8	1	1	2	3	3	3
Leelanaw	Totals	41	----	3	2	2	1	2	4	12	5	4	3	2	----	24	2	2	1	2	2	2	2	1	1	----	2
	Males	19	----	2	1	1	----	----	3	7	2	2	1	----	----	12	2	1	----	1	----	1	----	----	1	----	1
	Females	22	----	1	1	1	1	2	1	5	4	2	2	2	----	12	----	1	1	1	2	1	2	1	----	----	1
Lenawee	Totals	341	9	12	22	31	25	27	27	33	56	40	31	27	1	107	15	14	20	33	25	15	34	38	18	17	5
	Males	181	2	6	9	12	21	17	15	15	32	18	21	13	----	65	9	4	8	10	11	10	21	22	13	8	----
	Females	159	7	6	13	19	4	10	12	18	24	22	10	14	----	42	6	10	12	23	13	5	13	16	5	9	5
	Unkno'n	1	----	----	----	----	----	----	----	----	----	----	----	----	1	----	----	----	----	----	1	----	----	----	----	----	----
Livingston	Totals	163	8	8	15	8	7	12	16	27	11	20	14	17	----	64	4	3	7	14	13	15	17	10	11	4	1
	Males	89	6	2	9	3	5	7	8	17	2	13	9	8	----	39	2	----	3	7	4	10	9	8	5	1	----
	Females	72	2	6	6	5	2	5	6	10	9	7	5	9	----	23	2	3	4	7	9	5	8	2	5	3	1
	Unkno'n	2	----	----	----	----	----	----	2	----	----	----	----	----	----	2	----	----	----	----	----	----	----	----	----	----	----
Mackinac *a*	----------	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

a No returns of deaths.

TABLE VIII.—CONTINUED.

COUNTIES.	SEX.	Year 1870.	Months. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Ages. Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Unknown.
Macomb	Totals	208	11	8	12	10	12	16	20	29	24	21	17	25	3	78	7	4	10	25	8	16	19	14	13	12	2
	Males	113	5	6	6	8	6	8	9	13	14	14	8	13	3	45	1	2	5	11	4	8	13	9	7	6	2
	Females	95	6	2	6	2	6	8	11	16	10	7	9	12	....	33	6	2	5	14	4	8	6	5	6	6	....
Manistee	Totals	69	1	2	5	3	2	5	8	16	9	8	8	2	....	38	3	....	6	10	5	3	1	2	....	....	1
	Males	41	....	2	4	....	1	2	5	10	5	6	4	2	....	19	2	....	5	5	5	3	....	2	....	....	....
	Females	28	1	....	1	3	1	3	3	6	4	2	4	....	....	19	1	....	1	5	....	....	1	....	....	....	1
Manitou *a*	.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Marquette	Totals	266	6	18	15	9	20	22	29	40	40	17	24	25	1	188	29	7	6	21	8	5	3	1	2	1	....
	Males	138	4	10	10	3	10	14	17	20	20	7	10	13	....	89	18	5	1	14	4	3	3	....	....	1	....
	Females	127	2	7	5	6	10	8	12	20	20	10	14	12	1	98	11	2	5	7	4	2	....	1	2	....	....
	Unkno'n.	1	....	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....

Mason	Totals	20	1	----	----	4	1	3	2	----	4	2	1	2	----	11	----	----	1	2	1	3	----	1	1	----	----
	Males	11	1	----	----	1	1	2	1	----	2	2	----	1	----	5	----	----	1	----	----	3	----	1	1	----	----
	Females	9	----	----	----	3	----	1	1	----	2	----	1	1	----	6	----	----	----	2	1	----	----	----	----	----	----
Mecosta	Totals	70	1	3	6	4	4	3	7	11	5	8	8	10	----	27	4	2	3	11	7	7	4	----	1	3	1
	Males	32	----	----	3	2	3	2	4	3	1	3	5	6	----	14	2	2	2	3	2	2	1	----	1	2	1
	Females	38	1	3	3	2	1	1	3	8	4	5	3	4	----	13	2	----	1	8	5	5	3	----	----	1	----
Menominee	Totals	4	1	----	----	----	----	----	----	----	----	----	2	1	----	2	----	----	----	1	----	----	----	----	----	----	1
	Males	1	----	----	----	----	----	----	----	----	----	----	----	1	----	1	----	----	----	----	----	----	----	----	----	----	----
	Females	2	----	----	----	----	----	----	----	----	----	----	2	----	----	1	----	----	----	1	----	----	----	----	----	----	----
	Unknown	1	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1
Midland	Totals	45	1	3	3	2	2	3	8	4	7	4	6	2	----	18	3	----	3	8	1	4	4	2	2	----	----
	Males	26	1	3	----	1	1	2	5	3	5	1	2	2	----	10	1	----	3	5	1	1	2	1	2	----	----
	Females	19	----	----	3	1	1	1	3	1	2	3	4	----	----	8	2	----	----	3	----	3	2	1	----	----	----
Missaukee *a*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Monroe *b*	Totals	274	16	11	23	6	19	18	25	45	32	33	21	25	----	105	21	9	13	21	14	14	12	26	23	12	4
	Males	143	10	5	12	3	9	9	13	23	19	15	13	12	----	59	10	4	4	12	3	8	9	11	15	8	----
	Females	131	6	6	11	3	10	9	12	22	13	18	8	13	----	46	11	5	9	9	11	6	3	15	8	4	4

a No returns of deaths. *b* No returns of deaths from township of Ida.

TABLE VIII.—CONTINUED.

COUNTIES.	SEX.	Year 1870.	MONTHS. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	AGES. Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Unknown.
Montcalm	Totals	127	7	7	3	9	5	8	17	13	16	16	14	16	1	55	9	5	6	14	8	6	6	7	5	2	4
	Males	65	3	6	2	4	3	1	7	7	10	9	5	7	1	28	4	2	3	6	3	2	5	6	4	----	2
	Females	61	4	1	1	4	2	2	10	6	6	7	9	9	----	27	5	3	3	8	5	4	1	1	1	2	1
	Unknown	1	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1
Muskegon	Totals	159	4	5	13	12	8	11	15	20	20	22	17	9	3	81	13	3	1	15	8	8	6	9	3	----	12
	Males	85	3	4	7	6	5	5	5	10	9	13	10	6	2	37	7	1	----	10	5	3	5	5	2	----	10
	Females	70	1	1	4	6	3	5	10	10	11	9	7	3	----	40	6	2	1	5	3	5	1	4	1	----	2
	Unkno'n	4	----	----	2	----	----	1	----	----	----	----	----	----	1	4	----	----	----	----	----	----	----	----	----	----	----
Newaygo	Totals	35	----	2	2	4	6	3	2	4	3	3	4	2	----	15	3	----	1	7	4	2	1	----	----	----	2
	Males	10	----	----	2	1	2	----	1	1	----	1	2	----	----	5	2	----	----	3	----	----	----	----	----	----	----
	Females	25	----	2	----	3	4	3	1	3	3	2	2	2	----	10	1	----	1	4	4	2	1	----	----	----	2

Oakland	Totals	255	9	6	18	14	20	15	32	25	34	24	34	24	----	69	11	6	12	32	22	14	19	19	26	11	14
	Males	126	3	5	7	6	10	6	23	13	15	12	15	11	----	40	3	3	4	8	11	9	13	14	11	5	5
	Females	129	6	1	11	8	10	9	9	12	19	12	19	13	----	29	8	3	8	24	11	5	6	5	15	6	9
Oceana	Totals	99	1	8	6	2	5	9	14	6	10	10	11	15	2	39	3	----	4	17	8	4	2	11	5	----	6
	Males	51	----	2	5	2	3	5	8	2	4	7	5	8	----	21	----	----	1	9	3	3	2	7	2	----	3
	Females	48	1	6	1	----	2	4	6	4	6	3	6	7	2	18	3	----	3	8	5	1	----	4	3	----	3
Ontonagon	Totals	16	----	1	2	----	1	1	4	1	----	2	1	3	----	10	1	----	----	----	1	1	----	2	1	----	----
	Males	8	----	1	1	----	----	1	3	----	----	1	1	----	----	5	1	----	----	----	----	----	----	1	1	----	----
	Females	8	----	----	1	----	1	----	1	1	----	1	----	3	----	5	----	----	----	----	1	1	----	1	----	----	----
Osceola	Totals	10	----	----	----	----	----	2	3	1	----	1	2	1	----	5	----	----	----	1	----	1	----	----	1	----	2
	Males	7	----	----	----	----	----	2	3	----	----	1	1	----	----	2	----	----	----	1	----	1	----	----	1	----	2
	Females	3	----	----	----	----	----	----	----	1	----	----	1	1	----	3	----	----	----	----	----	----	----	----	----	----	----
Ottawa	Totals	261	12	7	9	17	20	15	31	42	32	26	17	31	2	135	14	7	14	13	14	6	16	18	14	3	7
	Males	149	6	3	7	9	12	11	18	26	20	12	8	17	----	83	7	3	7	6	5	2	12	7	8	2	7
	Females	112	6	4	2	8	8	4	13	16	12	14	9	14	2	52	7	4	7	7	9	4	4	11	6	1	----
Presque Isle	*a*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

a No returns of deaths.

TABLE VIII.—CONTINUED.

COUNTIES.	SEX.	Year 1870.	MONTHS. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	AGES. Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Unknown.
Saginaw *a*	Totals	382	6	11	27	16	20	22	41	74	62	40	32	28	3	206	13	13	13	30	26	27	18	18	14	1	3
	Males	202	5	7	14	7	9	6	21	38	34	22	19	18	2	109	9	4	5	18	9	20	9	11	8	----	----
	Females	180	1	4	13	9	11	16	20	36	28	18	13	10	1	97	4	9	8	12	17	7	9	7	6	1	3
Sanilac	Totals	103	5	5	2	4	8	3	15	17	16	9	7	12	----	43	4	6	6	12	8	5	3	3	6	2	5
	Males	50	1	2	1	2	3	1	8	5	8	7	4	8	----	24	1	3	3	4	4	1	1	1	3	1	4
	Females	53	4	3	1	2	5	2	7	12	8	2	3	4	----	19	3	3	3	8	4	4	2	2	3	1	1
Schoolcraft	Totals	8	----	----	----	----	----	1	3	----	1	----	2	1	----	5	1	1	----	----	----	----	----	----	1	----	----
	Males	4	----	----	----	----	----	1	3	----	----	----	----	----	----	2	1	----	----	----	----	----	----	----	1	----	----
	Females	4	----	----	----	----	----	----	----	----	1	----	2	1	----	3	----	1	----	----	----	----	----	----	----	----	----
Shiawassee	Totals	138	5	10	6	11	10	8	9	20	18	18	12	11	----	46	5	2	6	14	15	8	16	9	11	4	2
	Males	72	----	6	4	5	5	5	4	13	6	11	7	6	----	29	2	1	2	6	7	4	11	3	6	1	----
	Females	65	5	4	2	5	5	3	5	7	12	7	5	5	----	16	3	1	4	8	8	4	5	6	5	3	2
	Unkno'n	1	----	----	----	1	----	----	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----

St. Clair	Totals	299	12	10	20	22	16	21	25	45	30	31	28	39	....	121	23	11	15	29	24	18	15	20	14	12	2
	Males	154	9	6	11	11	10	11	11	23	12	17	13	20	....	62	12	3	5	18	10	10	7	10	6	9	2
	Females	144	3	4	9	11	6	10	14	22	17	14	15	19	....	58	11	8	10	11	14	3	8	10	8	3	....
	Unkno'n	1	....	....	....	....	....	....	....	....	1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
St. Joseph	Totals	193	8	8	20	9	11	12	12	20	29	27	19	18	....	65	9	5	11	16	12	13	16	24	16	4	2
	Males	102	6	3	11	5	8	3	6	10	15	18	8	9	....	41	2	1	1	6	5	7	14	11	11	1	2
	Females	91	2	5	9	4	3	9	6	10	14	9	11	9	....	24	7	4	10	10	7	6	2	13	5	3	....
Tuscola	Totals	84	6	5	8	8	8	4	7	9	5	10	7	7	....	38	2	4	5	8	4	6	3	2	6	2	4
	Males	41	1	4	4	3	3	1	4	3	3	6	4	5	....	15	2	3	3	1	3	3	2	1	4	2	2
	Females	43	5	1	4	5	5	3	3	6	2	4	3	2	....	23	....	1	2	7	1	3	1	1	2	....	2
Van Buren	Totals	259	9	14	19	14	15	28	33	37	25	23	27	14	1	100	14	9	15	19	15	22	16	21	18	5	5
	Males	133	6	9	10	8	9	9	17	19	12	12	14	8	....	60	8	6	2	5	6	10	7	14	10	4	1
	Females	126	3	5	9	6	6	19	16	18	13	11	13	6	1	40	6	3	13	14	9	12	9	7	8	1	4
Washtenaw	Totals	311	10	15	24	17	28	18	32	41	53	26	23	24	....	100	15	7	18	23	23	21	24	29	38	16	2
	Males	157	5	10	15	8	12	7	15	22	30	10	10	13	....	49	4	3	4	10	7	9	17	16	25	11	2
	Females	154	5	5	9	9	16	11	17	19	23	16	13	11	....	51	11	4	9	13	16	12	7	13	13	5	....

a No returns of deaths from township of Chesaning.

TABLE VIII.—CONTINUED.

COUNTIES.	SEX.	Year 1870.	MONTHS. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	AGES. Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Unknown.
Wayne	Totals	1623	82	86	102	92	87	140	234	229	167	188	128	134	8	865	112	51	58	94	119	79	81	59	55	31	24
	Males	871	48	49	56	55	33	79	118	122	98	76	73	68	1	466	53	26	27	40	59	54	51	37	31	15	12
	Females	749	34	37	47	37	53	61	114	106	68	62	54	70	6	391	59	25	31	54	60	25	30	22	24	16	12
	Unkno'n.	8	----	----	----	----	1	----	2	1	1	----	1	1	1	8	----	----	----	----	----	----	----	----	----	----	----
Wexford	Totals	12	1	1	1	----	----	3	1	2	----	1	2	----	----	9	----	----	1	1	1	----	----	----	----	----	----
	Males	6	1	1	----	----	----	----	----	2	----	----	2	----	----	6	----	----	----	----	----	----	----	----	----	----	----
	Females	6	----	----	1	----	----	3	1	----	----	1	----	----	----	3	----	----	1	1	1	----	----	----	----	----	----

TABLE X.

Exhibiting, by Color, and by Sex, the Population June 1st, 1870; the Total Number of Deaths in Michigan during the Year 1870; and the Per Cent of Deaths to Population; and also, by Color, the Per Cent of Deaths of Each Sex to the Total Number of Deaths of Both Sexes.

COLOR.	SEX.	Population, June 1st, 1870. a	DEATHS, 1870. Per Cent to Population, by Color and Sex.	DEATHS, 1870. Total Number.	DEATHS, 1870. Per Cent of each Sex to Total of Both Sexes.
All Colors	Total	1,158,368	.933	10,766	--------
	Males	660,806	.930	5,589	52.09
	Females	552,562	.930	5,140	47.90
	Unknown	----------	----------	87	--------
White	Total	1,187,464	.905	10,298	--------
	Males	592,521	.902	5,349	52.02
	Females	544,943	.905	4,932	47.97
	Unknown	----------	----------	17	--------
Black	Total	5,496	3.347	184	--------
	Males	3,031	3.233	98	53.55
	Females	2,465	3.448	85	46.44
	Unknown	----------	----------	1	--------
Mulatto	Total	6,157	.032	2	--------
	Males	3,109	.032	1	50.00
	Females	3,048	.032	1	50.00
Indian	Total	4,251	2.775	118	--------
	Males	2,145	2.657	57	48.30
	Females	2,106	2.896	61	51.69
Unknown Colors	Total	----------	----------	164	--------
	Males	----------	----------	84	57.93
	Females	----------	----------	61	42.06
	Unknown	----------	----------	19	--------
Black and Mulatto	Total	11,653	1.596	186	--------
	Males	6,140	1.612	99	53.51
	Females	5,513	1.559	86	46.48
	Unknown	----------	----------	1	--------

a Except of counties and townships from which no returns of deaths were received.

TABLE XI.

Exhibiting, by Number and by Sex, for the State and Counties, the Color of all returned as having Died in Michigan during the Year ending December 31st, 1870.

STATE AND COUNTIES.	All Colors.				White.				Black.				Mulatto.				Indian.				Unknown.				Remarks.
	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Unknown.	
State	10,766	5,589	5,140	37	10,298	5,349	4,932	17	184	98	85	1	2	1	1	..	118	57	61	..	164	84	61	19	Includes 87 returned as African; 72 Colored; 1 Negro; 37 Red; 19 White and Indian.
Alcona	6	2	4	..	6	2	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Allegan	260	184	125	1	254	130	124	..	4	3	1	..	..	..	..	..	..	..	..	..	2	1	..	1	Includes 4 Colored.
Antrim	12	8	4	..	12	8	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Barry	180	100	79	1	179	99	79	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Bay	155	84	71	..	149	80	69	..	1	1	..	..	..	..	..	..	5	3	2	..	..	..	..	..	1 African.
Benzie	23	13	10	..	23	13	10	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Berrien	276	144	132	..	270	141	129	..	6	3	3	..	..	..	..	..	..	..	..	..	..	..	..	..	1 Colored.
Branch	226	113	113	..	221	109	112	..	1	1	..	..	..	..	..	..	..	..	..	..	4	3	1	..	
Calhoun	414	214	197	3	387	208	183	1	20	7	12	1	..	..	..	..	6	4	2	..	1	..	..	1	20 African.
Cass	220	118	101	1	183	95	88	..	36	23	13	..	..	..	..	..	..	..	..	..	1	..	..	1	30 Colored; 1 Negro.

Charlevoix	15	10	5	..	15	10	5	..	....	..	..	..	..	..	..	..	....	..	..	..	....	..	..	..		
Chippewa	29	10	19	..	9	1	8	..	....	..	..	..	..	..	..	..	16	7	9	..	4	2	2	..	10	White and Indian.
Clinton	241	117	123	1	234	114	120	..	4	2	2	..	..	..	..	..	....	..	..	..	3	1	1	1	4	Colored.
Delta	39	19	20	..	38	19	19	..	....	..	..	..	..	..	..	..	1	..	1	..	....	..	..	..	1	White and Indian.
Eaton	205	93	112	..	205	93	112	..	....	..	..	..	..	..	..	..	....	..	..	..	...	..	..	..		
Emmet	44	25	19	..	.....	.....	.....	..	....	..	..	..	..	..	..	..	44	25	19	..	....	..	..	..	7	White and Indian.
Genesee	242	113	129	1	240	112	128	..	1	1	..	..	..	..	..	..	....	..	..	..	1	..	..	1		
Gd. Traverse	28	21	7	..	28	21	7	..	....	..	..	..	..	..	..	..	....	..	..	..	....	..	..	..		
Gratiot	116	55	61	..	114	54	60	..	1	1	..	..	..	..	..	..	....	..	..	..	1	..	1	..	1	Colored.
Hillsdale	270	135	134	1	262	130	131	1	1	1	..	..	..	..	..	..	....	..	..	..	7	4	3	..	1	Colored.
Huron	64	29	35	..	63	28	35	..	....	..	..	..	..	..	..	..	1	1	..	..	....	..	..	..	1	Red.
Ingham	230	123	107	..	228	122	106	..	1	1	..	..	..	..	..	..	....	..	..	..	1	..	1	..	1	Colored.
Ionia	271	129	137	5	267	129	136	2	1	..	1	..	..	..	..	..	....	..	..	..	3	..	..	3		
Iosco	26	13	13	..	18	9	9	..	1	..	1	..	..	..	..	..	....	..	..	..	7	4	3	..	1	Colored.
Isabella	31	12	19	..	29	10	19	..	1	1	..	..	..	..	..	..	....	..	..	..	1	1	..	..	2	Colored.
Jackson	287	163	124	..	284	161	123	..	3	2	1	..	..	..	..	..	....	..	..	..	....	..	..	..		
Kalamazoo	307	157	148	2	303	156	146	1	3	1	2	..	..	..	..	..	....	..	..	..	1	..	..	1	3	Colored.
Kalkaska	3	2	1	..	3	2	1	..	....	..	..	..	..	..	..	..	....	..	..	..	....	..	..	..		
Kent	513	265	247	1	510	263	246	1	2	1	1	..	..	..	..	..	....	..	..	..	1	1	..	..		
Lake	4	.....	4	..	4	.....	4	..	....	..	..	..	..	..	..	..	....	..	..	..	....	..	..	..		
Lapeer	149	81	68	..	147	79	68	..	....	..	..	..	..	..	..	..	....	..	..	..	2	2	..	..		
Leelanaw	41	19	22	..	38	19	19	..	....	..	..	..	..	..	..	..	3	..	3	..	....	..	..	..		

TABLE XI.—CONTINUED.

COUNTIES.	All Colors.				White.				Black.				Mulatto.				Indian.				Unknown.				Remarks.
	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Unknown.	
Lenawee	341	181	159	1	309	163	145	1	4	2	2	..	1	..	1	..	....	..	..	..	27	16	11	..	4 Colored.
Livingston	163	89	72	2	161	89	71	1	1	..	1	..	..	..	..	..	....	..	..	..	1	..	..	1	
Macomb	209	113	95	..	207	113	94	..	1	..	1	..	..	..	..	..	....	..	..	..	....	..	..	..	
Manistee	69	41	28	..	69	41	28	..	....	..	..	..	..	..	..	..	....	..	..	..	....	..	..	..	
Marquette	266	138	127	1	266	138	127	1	....	..	..	..	..	..	..	..	....	..	..	..	....	..	..	..	
Mason	20	11	9	..	20	11	9	..	....	..	..	..	..	..	..	..	....	..	..	..	....	..	..	..	
Mecosta	70	32	38	..	70	32	38	..	....	..	..	..	..	..	..	..	....	..	..	..	....	..	..	..	
Menominee	4	1	2	1	4	1	2	1	....	..	..	..	..	..	..	..	....	..	..	..	....	..	..	..	
Midland	45	26	19	..	45	26	19	..	....	..	..	..	..	..	..	..	....	..	..	..	....	..	..	..	
Monroe	274	143	131	..	273	142	131	..	1	1	..	..	..	..	..	..	....	..	..	..	....	..	..	..	1 Colored.
Montcalm	127	65	61	1	126	65	61	..	....	..	..	..	..	..	..	..	....	..	..	..	1	..	..	1	
Muskegon	159	85	70	4	130	71	55	4	....	..	..	..	..	..	..	..	....	..	..	..	29	14	15	..	
Newaygo	35	10	25	..	35	10	25	..	....	..	..	..	..	..	..	..	....	..	..	..	....	..	..	..	
Oakland	255	126	129	..	236	109	127	..	1	1	..	..	..	..	..	..	....	..	..	..	18	16	2	..	1 Colored.
Oceana	99	51	48	..	61	35	26	..	....	..	..	..	..	..	..	..	36	15	21	..	2	1	1	..	26 Red.

Ontonagon...	16	8	8	--	16	8	8	--	----	--	--	--	--	--	--	--	----	--	--	--	----	--	--	--		
Osceola.....	10	7	3	--	10	7	3	--	----	--	--	--	--	--	--	--	----	--	--	--	----	--	--	--		
Ottawa.....	261	149	112	--	261	149	112	--	----	--	--	--	--	--	--	--	----	--	--	--	----	--	--	--		
Saginaw.....	382	202	180	--	377	199	178	--	4	2	2	--	--	--	--	--	1	1	--	--	----	--	--	--	4 Colored.	
Sanilac.....	103	50	53	--	103	50	53	--	----	--	--	--	--	--	--	--	----	--	--	--	----	--	--	--		
Schoolcraft..	8	4	4	--	7	4	3	--	----	--	--	--	--	--	--	--	1	--	1	--	----	--	--	--	1 White and Indian.	
Shiawassee..	138	72	65	1	137	72	65	--	----	--	--	--	--	--	--	--	----	--	--	--	1	--	--	1		
St. Clair.....	299	154	144	1	297	153	144	--	----	--	--	--	1	1	--	--	----	--	--	--	1	--	--	1		
St. Joseph...	193	102	91	--	192	102	90	--	1	--	1	--	--	--	--	--	----	--	--	--	----	--	--	--	1 Colored.	
Tuscola.....	84	41	43	--	84	41	43	--	----	--	--	--	--	--	--	--	----	--	--	--	----	--	--	--		
Van Buren...	259	133	126	--	252	132	120	--	3	--	3	--	--	--	--	--	4	1	3	--	----	--	--	--	3 Colored.	
Washtenaw..	311	157	154	--	268	132	136	--	12	7	5	--	--	--	--	--	----	--	--	--	31	18	13	--	10 Colored.	
Wayne.....	1,628	871	749	8	1,548	886	710	2	68	35	33	--	--	--	--	--	----	--	--	--	12	--	6	6	66 African.	
Wexford.....	12	6	6	--	11	6	5	--	----	--	--	--	--	--	--	--	----	--	--	--	1	--	1	--		

Table XI. is similar to Table VII. in last report, except that last year the table was made to fit the material, while this one contains an accurate statement of the returns, but is made as it is believed it should be, whether there was anything to put in the columns or not. The information which should be collected concerning color or race is whether the party was white, black, mulatto, Indian, white and Indian, Chinese, Japanese, etc. The words "African" and "colored" should not be employed; they are not sufficiently definite to be of the greatest use. It is to be regretted that so little effort has been made in some counties to return the color. This is particularly apparent in the counties of Lenawee, Muskegon, and Washtenaw, in which the numbers of deaths returned with no statement of color are respectively twenty-seven, twenty-nine, and thirty-one. These numbers are a sufficiently large proportion of the total deaths to vitiate any attempt at obtaining a comparative death-rate of the different races in those counties; and unless these counties be thrown out altogether, go far towards spoiling the results for the State. There is cause for congratulation, however, in the fact that the returns are very much better for 1870 than for 1869, and it is hoped that as those who collect the deaths shall see how much use can be made of this information, the returns will constantly and rapidly improve.

TABLE XII.

Exhibiting, by Number, and by Sex, for the State and Counties, the Nativity of all returned as having died in Michigan during the year ending December 31st, 1870.

STATE AND COUNTIES.	All Nativities.				Native.				Foreign.			Unknown.			
	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Total.	Males.	Females.	Unknown.
State	10,766	5589	5140	37	8804	4525	4258	26	1609	893	716	353	171	171	11
Alcona	6	2	4	....	4	....	4	....	....	1	....	1	1	....	..
Allegan	260	134	125	1	206	107	99	....	48	24	24	6	3	2	1
Antrim	12	8	4	....	10	7	3	....	2	1	1	....	....	....	..
Barry	180	100	79	1	151	85	65	1	22	10	12	7	5	2	..
Bay	155	84	71	....	123	62	61	...	30	21	9	2	1	1	..
Benzie	23	13	10	....	18	10	8	....	5	3	2	....	....	....	..
Berrien	276	144	132	....	238	117	121	....	33	24	9	5	3	2	.
Branch	226	113	113	....	206	102	104	....	13	7	6	7	4	3	..
Calhoun *a*	414	214	197	3	341	175	165	1	39	23	16	34	16	16	2
Cass	220	118	101	1	211	112	98	1	7	6	1	2	....	2	..
Charlevoix	15	10	5	....	11	6	5	....	4	4	....	....	....	....	..
Chippewa	29	10	19	....	27	9	18	....	2	1	1	....	....	....	..
Clinton	241	117	123	1	206	104	101	1	29	10	19	6	3	3	..
Delta *b*	39	19	20	....	28	15	13	....	11	4	7	....	....	....	..
Eaton	205	93	112	...	190	86	104	....	9	6	3	6	1	5	..
Emmet	44	25	19	....	44	25	19	....	....	....	....	....	....	....	..
Genesee	242	113	128	1	204	96	107	1	23	14	9	15	3	12	..
Gr. Traverse	28	21	7	....	22	16	6	....	3	3	....	3	2	1	..
Gratiot	116	55	61	....	99	45	54	....	8	6	2	9	4	5	..
Hillsdale	270	135	134	1	243	120	122	1	19	10	9	8	5	3	..
Huron	64	29	35	....	41	19	22	....	23	10	13	....	....	....	..
Ingham	230	123	107	....	200	108	92	....	19	10	9	11	5	6	..

a No returns from township of Battle Creek.
b No returns from Delton and Masonville.

TABLE XII.—CONTINUED.

COUNTIES.	All Nativities.				Native.				Foreign.			Unknown.			
	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Total.	Males.	Females.	Unknown.
Ionia	271	129	137	5	238	114	114	5	27	11	16	11	4	7	..
Iosco	26	13	13	....	19	11	8	....	5	2	3	2	....	2	..
Isabella	31	12	19	....	26	10	16	....	2	....	2	3	2	1	..
Jackson	287	163	124	....	262	148	114	....	19	10	9	6	5	1	..
Kalamazoo	307	157	148	2	261	134	125	2	37	21	16	9	2	7	..
Kalkaska	3	2	1	....	2	1	1	....	1	1	....	....	....	....	..
Kent	513	265	247	1	414	220	193	1	83	41	42	16	4	12	..
Lake	4	....	4	....	2	....	2	....	1	....	1	1	....	1	..
Lapeer	149	81	68	....	110	59	51	....	30	17	13	9	5	4	..
Leelanaw	41	19	22	....	30	14	16	....	11	5	6	....	....	....	..
Lenawee	341	181	159	1	300	159	140	1	33	20	13	8	2	6	..
Livingston	163	89	72	2	141	71	68	2	20	18	2	2	....	2	..
Macomb	208	113	95	....	160	83	77	....	42	27	15	6	3	3	..
Manistee	69	41	28	....	54	27	27	....	15	14	1	....	....	....	..
Marquette	266	138	127	1	214	112	101	1	52	26	26	....	....	....	..
Mason	20	11	9	....	16	10	6	....	4	1	3	....	....	....	..
Mecosta	70	32	38	....	54	24	30	....	11	5	6	5	3	2	..
Menominee	4	1	2	1	4	1	2	1	....	....	....	....	....	....	..
Midland	45	26	19	....	41	24	17	....	4	2	2	....	....	....	..
Monroe *c*	274	143	131	....	222	115	107	....	49	26	23	3	2	1	..
Montcalm	127	65	61	1	110	56	54	....	12	7	5	5	2	2	1
Muskegon	159	85	70	4	110	54	55	1	38	25	13	11	6	2	3
Newaygo	35	10	25	....	30	9	21	....	4	1	3	1	....	1	..
Oakland	255	126	129	....	198	97	101	....	45	23	22	12	6	6	..
Oceana	99	51	48	....	84	45	39	....	10	4	6	5	2	3	..
Ontonagon	16	8	8	....	12	7	5	....	4	1	3	....	....	....	..
Osceola	10	7	3	....	7	4	3	....	2	2	....	1	1	....	..
Ottawa	261	149	112	....	199	117	82	....	56	27	29	6	5	1	..
Saginaw *d*	382	202	180	....	281	144	137	....	91	54	37	10	4	6	..
Sanilac	108	50	58	....	59	30	29	....	42	19	23	2	1	1	..

c No returns from township of Ida.
d No returns from township of Chesaning.

TABLE XII.—CONTINUED.

COUNTIES.	All Nativities.				Native.				Foreign.			Unknown.			
	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Total.	Males.	Females.	Unknown.
Schoolcraft..	8	4	4	....	7	3	4	....	1	1	....	....	....	....	..
Shiawassee..	138	72	65	1	128	67	60	1	9	4	5	1	1	....	..
St. Clair	299	154	144	1	208	107	100	1	81	40	41	10	7	3	..
St. Joseph..	198	102	91	....	176	91	85	....	15	9	6	2	2	....	..
Tuscola.....	84	41	43	....	65	34	31	....	16	6	10	3	1	2	..
Van Buren..	259	133	126	....	242	122	120	....	12	7	5	5	4	1	..
Washtenaw.	311	157	154	....	249	120	129	....	49	31	18	13	6	7	..
Wayne.....	1628	871	749	8	1240	649	587	4	325	187	138	63	35	24	4
Wexford....	12	6	6	....	11	6	5	....	1	....	1	....	....	....	..

Table XIII. is given, not because it is supposed to furnish a completed statement of the comparative death-rates of native and foreign inhabitants, as at first thought it would seem to do, but for the reason that it is the best that can be done with the deaths as now collected. It must be kept in mind, however, that the foreign-born population is largely composed of people at the healthy ages in middle life, while the native-born includes persons at all ages born of native-born parents, and also all the clildren born in this country of the foreign-born citizens. The number of natives, therefore, is largely increased by the children of foreign parents. The mortality among children is always greater than the average at all ages, and it is quite possible, to say the least, that there may be a greater mortality among the children of foreign-born parents than among children at the same ages born of native parents. Much more valuable info rmation on this subject may be gained if the law be so changed that the na tivity of parents of all who die shall also be stated in the returns of deaths, as well as the nativity of decedents.

TABLE XIII.

Exhibiting, by Sex, for the State and Counties, the Nativity of the Population, June 1st, 1870, in Counties and Townships represented by Returns of Deaths during the year 1870; and the Per Cent of Deaths during the year, of each Nativity, to the Population of Corresponding Nativity.

STATE AND COUNTIES.	POPULATION.[a]									PER CENT OF DEATHS TO POPULATION.[a]								
	ALL NATIVITIES.			NATIVE.			FOREIGN.			ALL NATIVITIES.[b]			NATIVE.			FOREIGN.		
	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.[c]	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.
State[a]	1,153,368	600,806	552,562	902,169	461,963	440,206	251,199	138,843	112,356	.933	.930	.930	.975	.979	.966	.640	.643	.637
Alcona	696	393	303	382	202	180	314	191	123	.862	.508	1.320	1.047	2.222	.....	.318	.523	.....
Allegan	32,105	17,000	15,105	26,527	13,837	12,690	5,578	3,163	2,415	.809	.708	.802	.776	.773	.780	.860	.758	.993
Alpena[d]	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Antrim	1,985	1,118	867	1,313	713	600	672	405	267	.604	.715	.461	.761	.981	.500	.297	.246	.374
Barry	22,200	11,646	10,554	19,989	10,395	9,594	2,211	1,251	960	.810	.858	.748	.755	.817	.677	.995	.799	1.250
Bay	15,900	8,914	6,986	8,867	4,721	4,146	7,033	4,193	2,840	.974	.942	1.016	1.387	1.313	1.471	.426	.500	.316
Benzie	2,184	1,168	1,016	1,338	967	871	346	201	145	1.053	1.112	.984	.979	1.034	.918	1.445	1.492	1.379
Berrien	35,104	18,063	17,041	30,057	15,264	14,793	5,047	2,799	2,248	.786	.797	.774	.791	.766	.817	.653	.857	.400
Branch	26,227	13,248	12,979	24,519	12,305	12,214	1,708	943	765	.861	.852	.870	.840	.828	.851	.761	.742	.784

Calhoun [e]	35,382	17,901	17,481	31,323	15,717	15,606	4,059	2,184	1,875	1.170	1.195	1.126	1.886	1.113	1.057	.960	1.053	.858
Cass	21,096	10,938	10,158	19,681	10,081	9,600	1,415	857	558	1.042	1.078	.994	1.072	1.111	1.020	.494	.700	1.179
Charlevoix	1,724	941	783	1,188	620	568	536	321	215	.870	1.062	.638	.925	.967	.880	.746	1.246	-----
Cheboygan [d]	--------	--------	--------	--------	--------	--------	--------	--------	--------	------	------	------	------	------	------	------	------	-----
Chippewa	1,690	930	760	1,218	638	580	472	292	180	1.715	1.075	2.500	2.216	1.410	3.108	.423	.342	.555
Clare [d]	--------	--------	--------	--------	--------	--------	--------	--------	--------	------	------	------	------	------	------	------	------	-----
Clinton	22,851	11,813	11,038	20,107	10,309	9,798	2,744	1,504	1,240	1.054	.990	1.113	1.024	1.008	1.030	1.056	.664	1.531
Delta [f]	1,456	837	619	744	366	374	716	471	245	2.677	2.270	3.231	3.780	4.098	3.475	1.536	.849	2.857
Eaton	25,163	12,949	12,214	23,610	12,050	11,560	1,553	899	654	.814	.718	.916	.804	.713	.899	.579	.667	.458
Emmet	1,211	629	582	1,162	598	564	49	31	18	3.633	3.974	3.264	3.786	4.180	3.368	------	------	-----
Genesee	33,395	17,449	16,446	28,510	14,520	13,990	5,385	2,929	2,456	.713	.647	.778	.715	.661	.764	.427	.477	.366
Gr. Trav'se	4,443	2,389	2,054	3,322	1,742	1,580	1,121	647	474	.630	.878	.340	.662	.918	.370	.267	.463	-----
Gratiot	11,808	6,189	5,619	10,630	5,545	5,085	1,178	644	534	.982	.888	1.085	.931	.811	1.061	.678	.931	.374
Hillsdale	31,688	16,104	15,584	29,495	14,885	14,610	2,193	1,219	974	.852	.882	.859	.823	.806	.885	.866	.820	.924
Houghton [d]	--------	--------	--------	--------	--------	--------	--------	--------	--------	------	------	------	------	------	------	------	------	-----
Huron	9,048	5,036	4,012	4,270	2,279	1,991	4,778	2,757	2,021	.707	.575	.872	.960	.833	1.104	.481	.362	.643
Ingham	25,268	13,096	12,172	22,678	11,699	10,979	2,590	1,397	1,193	.910	.939	.879	.881	.923	.837	.733	.715	.754
Ionia	27,675	14,452	13,223	24,195	12,529	11,666	3,480	1,923	1,557	.979	.892	1.036	.963	.909	.977	.775	.572	1.027
Iosco [g]	3,175	1,913	1,262	1,746	963	783	1,429	950	479	.818	.607	1.030	1.082	1.142	1.021	.249	.210	.626

[a] Of counties and townships from which returns of deaths were received.
[b] Including unknown nativity.
[c] Includes unknown sex.
[d] No returns of deaths.
[e] No returns of deaths from township of Battle Creek.
[f] No returns of deaths from townships of Delton and Masonville.
[g] Population of unorganized county of Ogemaw included.

TABLE XIII.—CONTINUED.

COUNTIES.	POPULATION.[a]									PER CENT OF DEATHS TO POPULATION.[a]								
	ALL NATIVITIES.			NATIVE.			FOREIGN.			ALL NATIVITIES.[b]			NATIVE.			FOREIGN.		
	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.[c]	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.
Isabella	4,113	2,211	1,902	3,559	1,879	1,680	554	332	222	.758	.542	.998	.730	.582	.952	.361	.....	.900
Jackson	36,040	19,056	16,984	31,130	16,233	14,897	4,910	2,823	2,087	.796	.855	.730	.841	.911	.765	.386	.354	.431
Kalamazoo	32,065	16,522	15,543	27,424	14,007	13,417	4,641	2,515	2,126	.957	.950	.952	.951	.956	.931	.797	.834	.752
Kalkaska	424	244	180	236	124	112	188	120	68	.707	.819	.555	.847	.806	.892	.531	.833	.....
Kent	50,410	26,166	24,244	38,444	19,618	18,826	11,966	6,548	5,418	1.017	1.012	1.010	1.076	1.121	1.025	.693	.626	.775
Keweenaw[d]	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lake	548	305	243	412	232	180	136	73	63	.729	.....	1.646	.485	.....	1.111	.735	.....	1.587
Lapeer	21,342	11,051	10,291	15,857	8,068	7,789	5,485	2,983	2,502	.698	.732	.660	.693	.731	.654	.546	.569	.519
Leelanaw	4,577	2,401	2,176	3,045	1,585	1,460	1,532	816	716	.895	.790	1.011	.985	.883	1.095	.718	.612	.837
Lenawee	45,601	22,916	22,685	39,871	19,887	19,984	5,730	3,029	2,701	.747	.789	.700	.752	.799	.700	.575	.662	.481
Livingston	19,335	10,072	9,263	16,899	8,705	8,194	2,436	1,367	1,069	.843	.883	.777	.834	.815	.829	.820	1.316	.187
Mackinac[d]	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Macomb	27,619	14,096	13,523	20,333	10,275	10,058	7,286	3,821	3,465	.758	.801	.702	.786	.807	.765	.576	.706	.432
Manistee	6,074	3,458	2,616	3,407	1,837	1,570	2,667	1,621	1,046	1.135	1.185	1.070	1.584	1.469	1.719	.562	.863	.956

Manitou [d]	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Marquette	14,278	8,485	5,793	6,111	3,245	2,866	8,167	5,240	2,927	1.863	1.626	2.192	3.501	3.451	3.524	.636	.496	.888
Mason	3,266	1,814	1,452	2,352	1,254	1,098	914	560	354	.612	.606	.619	.680	.797	.546	.437	.178	.847
Mecosta	5,645	3,061	2,584	4,205	2,251	1,954	1,440	810	630	1.240	1.045	1.470	1.284	1.066	1.585	.763	.617	.952
Menominee	1,895	1,266	629	1,021	580	441	874	686	188	.211	.078	.317	.891	.172	.458	.....	.....	.....
Midland	3,283	1,813	1,470	2,456	1,332	1,124	827	481	346	1.370	1.434	1.224	1.669	1.801	1.511	.483	.415	.577
Missaukee [d]	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Monroe [e]	26,455	13,405	13,050	21,905	11,019	10,886	4,550	2,386	2,164	1.085	1.066	1.008	1.013	1.043	.982	1.076	1.089	1.062
Montcalm	13,641	7,284	6,357	11,748	6,243	5,505	1,893	1,041	852	.931	.892	.959	.936	.897	.980	.633	.672	.586
Muskegon	14,892	8,402	6,490	9,444	5,067	4,377	5,448	3,335	2,113	1.067	1.011	1.078	1.164	1.065	1.256	.697	.749	.615
Newaygo	7,292	3,910	3,382	6,298	3,330	2,968	994	580	414	.479	.255	.739	.476	.270	.707	.402	.172	.724
Oakland	40,906	21,135	19,771	34,810	17,753	17,057	6,096	3,382	2,714	.623	.596	.652	.568	.546	.592	.738	.680	.810
Oceana	7,222	3,948	3,274	6,082	3,337	2,745	1,140	611	529	1.370	1.317	1.466	1.381	1.348	1.420	.877	.654	1.134
Ontonagon	2,846	1,430	1,416	1,712	831	881	1,134	599	535	.562	.559	.564	.700	.842	.567	.352	.166	.560
Osceola	2,104	1,167	937	1,442	776	666	662	391	271	.475	.599	.320	.485	.515	.450	.302	.511	.....
Ottawa	26,650	14,050	12,600	17,477	9,025	8,452	9,173	5,025	4,148	.979	1.060	.888	1.138	1.296	.970	.610	.537	.699
Pres. Isle [f]	355	229	126	96	56	40	259	173	86	.....	.....	.....	.....	.....	.....	.....	.....	.....
Saginaw [g]	37,591	20,290	17,301	23,096	12,028	11,068	14,495	8,262	6,233	1.016	.995	1.040	1.216	1.197	1.237	.620	.653	.593
Sanilac	14,565	7,722	6,843	6,969	3,639	3,330	7,596	4,083	3,513	.707	.647	.774	.846	.824	.870	.552	.465	.654

[a] Of counties and townships from which returns of deaths were received.
[b] Including unknown nativity.
[c] Includes unknown sex.
[d] No returns of deaths.
[e] No returns of deaths from township of Ida.
[f] Return from county clerk, but no deaths returned to him.
[g] No returns of deaths from township of Chesaning.

TABLE XIII.—CONTINUED.

COUNTIES.	POPULATION.[a]									PER CENT OF DEATHS TO POPULATION.[a]								
	ALL NATIVITIES.			NATIVE.			FOREIGN.			ALL NATIVITIES.[b]			NATIVE.			FOREIGN.		
	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.[c]	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.
Schoolcraft	799	519	280	318	179	139	481	340	141	1.001	.770	1.428	2.201	1.675	2.877	.207	------	-----
Shiawassee	20,822	10,815	10,007	17,984	9,261	8,723	2,838	1,554	1,284	.662	.665	.649	.711	.723	.687	.317	.257	.389
St. Clair	36,759	19,011	17,748	21,856	11,139	10,717	14,903	7,872	7,031	.818	.819	.811	.951	.960	.933	.543	.508	.583
St. Joseph	26,272	13,480	12,792	23,645	11,981	11,664	2,627	1,499	1,128	.734	.756	.711	.744	.759	.728	.570	.600	.581
Tuscola	13,715	7,263	6,452	10,281	5,377	4,904	3,434	1,886	1,548	.612	.564	.666	.632	.632	.632	.465	.318	.645
Van Buren	28,835	14,907	13,928	26,309	13,507	12,802	2,526	1,400	1,126	.898	.892	.904	.919	.903	.937	.475	.500	.444
Washtenaw	41,440	21,478	19,962	32,814	16,743	16,071	8,626	4,735	3,891	.750	.730	.771	.758	.716	.802	.568	.654	.462
Wayne	119,068	59,964	59,104	73,166	36,303	36,863	45,902	23,661	22,211	1.367	2.179	1.436	1.694	1.787	1.592	.708	.790	.620
Wexford	650	344	306	588	312	276	62	32	30	1.846	1.744	1.959	1.870	1.923	1.811	1.612	------	3.333

[a] Of counties and townships from which returns of deaths were received.
[b] Including unknown nativity.
[c] Includes unknown sex.

CAUSES OF DEATH.

The order of succession of the tables and remarks concerning the causes of death is changed from that adopted in last report, in order still further to carry out the plan of giving general views first and then descending toward those more specific. Table XIV. exhibits the total number of deaths in the State from all causes, and the number and per cent of deaths from each class of causes during the year 1870, and also during the several periods of time embraced in the three previous reports. The table is not precisely similar in plan to Exhibit B. in last report, which only considered deaths from specified causes, while this table shows the number and per cent from all causes, including unknown and unclassified.

The plan of classification is the same as in previous reports, being the one in general use in this and other countries. The details of the plan may be learned from Table XVI., in which is exhibited the number of deaths in the State and in each county from each class, order, and specified cause recognized in this classification; and by foot-notes some other details are pointed out.

TABLE XIV.

Number of Deaths in Michigan from all Causes, and from Each Class of Causes, and Per Cent of Deaths from Each Class of Causes to Deaths from all Causes, for the Year ending April 5, 1868, for the Nine Months ending December 31, 1868, and for Each of the Years 1869 and 1870.

CLASSES.	Michigan for Year ending April 5, 1868.		Michigan for nine months ending Dec. 31, 1868.		Michigan for the Year 1869.		Michigan for the Year 1870.	
	Number.	Per Cent of Total.	Number.	Per Cent of Total.	Number.	Per Cent of Total.	Number.	Per Cent of Total.
All causes	6,271	100.00	6,372	100.00	9,145	100.00	10,766	100.00
I.—Zymotic diseases	1,636	26.08	1,296	20.33	2,518	27.47	3,429	31.85
II.—Constitutional diseases	1,301	20.74	1,176	18.45	1,734	18.96	2,072	19.24
III.—Local diseases	1,554	24.78	1,985	31.15	2,334	25.52	2,699	25.06
IV.—Developmental diseases	477	7.60	876	13.74	814	8.90	840	7.80
V.—Violent deaths	383	6.10	358	5.61	468	5.11	495	4.59
Unknown and unclassified	920	14.67	681	10.68	1,282	14.01	1,231	11.43

In order the better to make use of the very favorable combination of circumstances in this State for studying the influences of the great variety of climate and other conditions depending upon differences in latitude, relation to the lake shores, and inland situations, surface formation, etc., the State was, in the last report, divided into eleven geographical divisions, and the same are maintained for the purposes of this report. The several counties included in each division may be seen in Exhibit G., in which is also shown the counties and townships from which no returns of deaths in 1870 were received.

EXHIBIT G.

Eleven Geographical Divisions of the State, formed for the purpose of facilitating the study of Causes of Death, with a list of Counties included in each Division.

Upper Peninsula.	North-western.	Northern.	North-eastern.	Western.	Central.	Northern Central.	Bay and Eastern.	South-western.	South-eastern.	Southern Central.
Chippewa.	Benzie.	Antrim.	Alcona.	Kent.	Barry.	Clare. *b*	Bay.	Allegan.	Macomb.	Branch.
Delta. *a*	Gr. Traverse.	Charlevoix.	Alpena. *b*	Lake.	Clinton.	Isabella.	Huron.	Berrien.	Monroe. *d*	Calhoun.
Houghton. *b*	Leelanaw.	Cheboygan. *b*	Iosco.	Mason.	Eaton.	Mecosta.	Lapeer.	Cass.	Oakland.	Hillsdale.
Keweenaw. *b*	Manistee.	Emmet.	Presque Isle.	Muskegon.	Genesee.	Midland.	Saginaw. *c*	Van Buren.	Wayne.	Jackson.
Mackinac. *b*	Manitou. *b*	Kalkaska.		Newaygo.	Gratiot.		Sanilac.			Kalamazoo.
Marquette.	Missaukee. *b*			Oceana.	Ingham.		St. Clair.			Lenawee.
Menominee.	Wexford.			Osceola.	Ionia.		Tuscola.			St. Joseph.
Ontonagon.				Ottawa.	Livingston.					Washtenaw.
Schoolcraft.					Montcalm.					
					Shiawassee.					

a No returns of deaths from the townships of Delton and Masonville.
b No returns of deaths from this county for the year 1870.
c No returns of deaths from the township of Chesaning.
d No returns of deaths from the township of Ida.
e No returns of deaths from the township of Battle Creek.

TABLE XV.

Exhibiting the Per Cent of Deaths from All Causes to Population, and the Per Cent of Deaths from each Class of Causes to Deaths from All Causes, for the State, and for Eleven Geographical Divisions of the State, during the Year 1870.

STATE AND GEOGRAPHICAL DIVISIONS. *a*	Per Cent of all deaths to Population in '70. *b*	Per Cent of Deaths from each Class of Causes to Deaths from all Causes.					
		Class I. Zymotic Diseases.	Class II. Constitutional Diseases.	Class III. Local Diseases.	Class IV. Developmental Diseases.	Class V. Violent Deaths.	Unknown and Unclassified.
STATE *b*	.933	31.85	19.24	25.06	7.80	4.59	11.43
Upper Peninsula	1.576	43.92	8.83	17.12	11.04	4.41	14.64
Northwestern	.964	33.52	16.18	20.80	8.09	8.09	13.29
Northern	1.384	33.78	12.16	17.56	5.40	5.40	25.67
Northeastern	.757	28.12	18.75	25.00	9.37	9.37	9.37
Western	.979	34.60	18.80	21.70	5.35	3.81	15.71
Northern Central	1.119	31.50	14.38	23.28	6.16	8.21	16.43
Central	.859	29.79	19.86	25.98	8.67	4.18	11.50
Bay and Eastern	.829	29.20	17.07	24.43	7.92	7.44	13.91
Southwestern	.866	32.21	21.67	25.41	5.71	4.53	10.44
Southern Central	.854	31.50	20.22	29.11	6.13	4.38	8.64
Southeastern	1.104	31.88	20.42	23.93	10.36	3.50	9.93

a For counties included in each Division, see Exhibit G, page 217.
b Except of counties and townships from which no returns of deaths in 1870 were received.

Table XV. allows of a comparison of the several geographical divisions as regards the total death-rate from all causes, and from each class of causes. The plan of the table is a little more complete than Exhibit C., in last report, inasmuch as it shows the proportion of deaths from unknown and unclassified causes. That exhibit, the letter being changed to "H.," is made to follow the table, in order to allow of comparisons between the results in 1869 and 1870.

EXHIBIT H.

Percentage of Deaths from All Causes to Population, and Per Cent of Deaths from each Class of Causes to Deaths from all Specified Causes, for the State, and for Eleven Geographical Divisions of the State, during the Year 1869.

STATE AND GEOGRAPHICAL DIVISIONS.	Per Cent of all deaths to Population in 1870.	Per Cent to Deaths from all Specified Causes.				
		Class I. Zymotic Diseases.	Class II. Constitutional Diseases.	Class III. Local Diseases.	Class IV. Developmental Diseases.	Class V. Violent Deaths.
STATE	.775	31.95	22.05	29.68	10.35	5.95
Upper Peninsula	.881	40.72	10.86	25.38	12.67	10.40
Northwestern	.882	37.09	17.74	28.22	8.06	8.06
Northern	.914	28.88	15.55	37.77	11.11	6.66
Northeastern	.795	44.18	11.63	11.63	20.93	11.63
Western	.773	34.64	16.60	32.94	10.58	5.22
Northern Central	.706	36.47	23.52	23.52	8.23	8.23
Central	.726	30.02	25.41	30.23	8.79	5.51
Bay and Eastern	.799	36.18	19.68	25.04	11.92	7.15
Southwestern	.689	31.88	24.43	30.19	7.72	5.75
Southern Central	.685	29.11	24.80	31.51	8.38	6 17
Southeastern	.942	30.77	21.52	29.64	13.23	4.82

The order of succession of the divisions arranged with reference to the greatest total death-rate, as shown in the first column of the table and exhibit, is not the same for 1870 as it was shown for 1869. In that year, beginning with the division having the greatest death-rate, the order was as follows: S. E., N., N. W., U. P., B. & E., N. E., W., C., N. C., S. W., S. C. In 1870 the divisions arranged in the same manner have the following order: U. P., N., N. C., S. E., W., N. W., S. W., C., S. C., B. & E., N. E. Further comparisons may be made between the two years as regards deaths from each class of causes.

TABLE XVI.—CAUSES OF DEATH.—NOSOLOGICAL ARRANGEMENT.

Exhibiting the number of Deaths in the State, and in each County, during the year 1870, from Specified Causes Statistically Classified (Still-births included).

CAUSES OF DEATH.	STATE.	COUNTIES.																			
		Alcona.	Allegan.	Antrim.	Barry.	Bay.	Benzie.	Berrien.	Branch.	Calhoun.	Cass.	Charlevoix.	Chippewa.	Clinton.	Delta.	Eaton.	Emmet.	Genesee.	Gr. Traverse.	Gratiot.	Hillsdale.
All causes	10,766	6	260	12	180	155	23	276	226	414	220	15	29	241	39	205	44	242	28	116	270
Specified causes *a*	9,585	5	232	10	154	134	23	236	207	379	208	14	22	217	27	186	29	206	24	102	249
CLASSES.																					
I.—Zymotic Diseases	3,429	----	71	4	31	58	11	88	66	146	73	7	15	69	7	56	14	67	9	45	69
II.—Constitutional Diseases	2,072	----	53	1	35	25	4	60	55	84	54	2	1	50	3	45	5	51	3	22	74
III.—Local Diseases	2,699	2	76	3	58	32	5	64	71	104	55	2	1	60	12	56	8	65	8	18	71
IV.—Developmental Diseases	840	2	18	2	19	8	2	12	6	24	13	1	4	23	2	21	----	17	2	14	17
V.—Violent Deaths	495	1	14	----	11	16	1	12	9	21	8	2	1	15	3	8	2	6	2	3	18
ORDERS.																					
I.—1. Miasmatic Diseases	3,375	----	70	4	30	58	11	88	64	142	73	7	15	69	6	56	13	67	9	45	67
2. Enthetic Diseases	13	----	----	----	----	----	----	----	1	----	----	----	----	----	1	----	1	----	----	----	----

3. Dietic Diseases	16	----	1	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	2
4. Parasitic Diseases	25	----	----	----	1	----	----	----	1	3	----	----	----	----	----	----	----	----	----	----	----
II.—1. Diathetic Diseases	534	----	16	----	8	8	----	8	9	14	15	1	----	15	----	17	----	8	3	3	30
2. Tubercular Diseases	1,538	----	37	1	27	17	4	52	46	70	39	1	1	35	3	28	5	43	----	19	44
III.—1. Diseases of Nervous System	1,091	----	30	1	21	10	3	16	25	45	19	----	----	21	2	18	6	19	5	7	29
2. Diseases of Organs of Circulation	311	----	5	----	11	----	1	10	13	12	6	1	----	9	2	10	----	6	1	3	8
3. Diseases of Respiratory Organs	631	1	21	1	12	15	----	22	17	20	13	----	1	13	5	13	2	19	1	3	16
4. Diseases of Digestive Organs	480	1	16	1	9	7	----	12	9	21	11	1	----	13	3	9	----	16	1	4	11
5. Diseases of Urinary Organs	110	----	3	----	2	----	1	4	6	4	3	----	----	1	----	1	----	3	----	1	5
6. Diseases of Generative Organs	22	----	----	----	----	----	----	----	1	----	2	----	----	----	----	3	----	1	----	----	1
7. Diseases of Organs of Locomotion	8	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1
8. Diseases of Integumentary System	46	----	1	----	2	----	----	----	----	2	1	----	----	1	----	2	----	1	----	----	----
IV.—1. Dev. Diseases of Children	374	2	5	2	6	4	2	4	1	11	4	1	1	6	1	7	----	5	1	7	3
2. Dev. Diseases of Adults	153	----	6	----	5	1	----	5	2	5	2	----	----	7	1	5	----	4	----	3	4
3. Dev. Diseases of Old People	313	----	7	----	8	3	----	3	3	8	7	----	3	10	----	9	----	8	1	4	10
4, Diseases of Nutrition	------	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

a Includes still-born.

[NOTE.—In Tables VIII and XIII of Deaths, all the counties appear; those from which no returns were received being designated by reference-marks and foot-notes. In the other tables, only those counties appear from which returns of deaths in 1870 were received.]

TABLE XVI.—CONTINUED.

CAUSES OF DEATH.	STATE.	COUNTIES.																			
		Alcona.	Allegan.	Antrim.	Barry.	Bay.	Benzie.	Berrien.	Branch.	Calhoun.	Cass.	Charlevoix.	Chippewa.	Clinton.	Delta.	Eaton.	Emmet.	Genesee.	Gr. Traverse.	Gratiot.	Hillsdale.
V.—1. Accident or Negligence	445	1	12	----	11	15	1	10	8	16	5	2	1	13	3	8	2	6	2	8	16
2. Battle	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
3. Homicide	5	----	----	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----
4. Suicide	34	----	2	----	----	1	----	2	1	4	----	----	----	2	----	----	----	----	----	----	2
5. Execution	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
6. Violent Deaths	11	----	----	----	----	----	----	----	----	1	2	----	----	----	----	----	----	----	----	----	----
Sudden Deaths (causes unascertained)	5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Causes not Specified	1,226	1	28	2	26	21	----	40	19	35	17	1	7	24	12	19	15	36	4	14	21
CLASS I.—Zymotic	3,429	----	71	4	31	53	11	88	66	146	73	7	15	69	7	56	14	67	9	45	69
I.—ORDER 1. Miasmatic	3,375	----	70	4	31	53	11	88	64	142	73	7	15	69	6	56	13	67	9	45	67
1. Small-pox *a*	11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
2. Measles	56	----	----	----	----	----	----	----	6	16	----	----	1	2	----	3	----	----	----	1	1

3. Scarlatina	852	----	5	----	6	5	----	18	2	55	22	----	13	23	2	5	----	2	----	9	6
4. Diphtheria	121	----	1	----	----	5	----	2	3	1	3	----	----	1	----	2	----	1	----	1	2
5. Quinsy	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
6. Croup	127	----	4	----	----	----	----	3	2	5	3	----	----	1	----	1	----	3	1	----	1
7. Whooping Cough	119	----	4	----	----	1	----	2	2	1	3	----	----	----	----	1	3	6	----	1	----
8. Typhus *b*	704	----	15	1	11	8	4	14	23	21	18	----	1	5	2	22	3	16	2	12	35
9. Erysipelas	68	----	----	----	1	1	----	2	4	1	2	----	----	2	----	2	----	2	----	1	2
10. Metria (Puerperal Fever)	35	----	3	----	2	----	----	1	1	2	----	1	----	4	----	----	----	1	----	1	----
11. Carbuncle	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
12. Influenza	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
13. Dysentery	374	----	11	3	----	5	2	21	9	11	9	1	----	10	----	7	2	23	1	9	10
14. Diarrhea	407	----	10	----	4	21	2	7	3	4	----	5	----	4	----	5	5	1	2	2	3
15. Cholera Infantum	181	----	4	----	2	3	----	4	2	16	5	----	----	4	----	1	----	4	----	1	2
16. Cholera *c*	38	----	----	----	----	----	1	3	----	3	----	----	----	1	----	----	----	----	----	1	----
17. Ague *d*	162	----	5	----	4	4	1	7	3	3	6	----	----	8	----	1	----	4	----	6	1
18. Remittent Fever *e*	74	----	5	----	----	----	----	4	4	2	1	----	----	3	1	6	----	2	3	----	2
19. Rheumatism	44	----	3	----	----	----	1	----	----	1	1	----	----	1	1	----	----	2	----	----	2
I.—Order 2. Enthetic	13	----	----	----	----	----	----	----	1	----	----	----	----	----	1	----	1	----	----	----	----
1. Syphilis	12	----	----	----	----	----	----	----	----	----	----	----	----	----	1	----	1	----	----	----	----

a Includes 1 Chicken-pox and 1 Vaccination.
b Includes 574 Typhoid Fever; 1 Typhus Fever; 126 Fever unspecified; 1 Continued Fever; 1 Blood Poisoning; 1 Malignant Fever.
c Includes 30 Cholera Morbus.
d Includes 88 Congestive Chills; 59 Intermittent Fever; 7 Worm Fits; 8 Congestive Fever.
e Includes 65 Bilious Fever.

TABLE XVI.—CONTINUED.

CAUSES OF DEATH.	STATE.	COUNTIES.																			
		Alcona.	Allegan.	Antrim.	Barry.	Bay.	Benzie.	Berrien.	Branch.	Calhoun.	Cass.	Charlevoix.	Chippewa.	Clinton.	Delta.	Eaton.	Emmet.	Genesee.	Gr. Traverse.	Gratiot.	Hillsdale.
2. Stricture of Urethra	1	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----
3. Hydrophobia	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
4. Glanders	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I.—ORDER 3. Dietic	16	----	1	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	2
1. Privation	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
2. Purpura and Scurvy	2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
3. Delirium Tremens } (Alcoholism.)	4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1
4. Intemperance } (Alcoholism.)	10	----	1	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	1
I.—ORDER 4. Parasitic	25	----	----	----	1	----	----	----	1	3	----	----	----	----	----	----	----	----	----	----	----
1. Thrush	20	----	----	----	1	----	----	----	1	3	----	----	----	----	----	----	----	----	----	----	----
2. Worms	5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CLASS II.—Constitutional	2,072	----	53	1	35	25	4	60	55	84	54	2	1	50	3	45	5	51	3	22	74

II.—Order 1. Diathetic	534	----	16	----	8	8	----	8	9	14	15	1	----	15	----	17	----	8	3	3	30
1. Gout	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1	----	----
2. Dropsy and Anæmia	366	----	15	----	5	6	----	5	7	7	10	----	----	9	----	12	----	6	----	2	23
3. Cancer	121	----	1	----	2	2	----	2	2	5	4	----	----	5	----	4	----	2	1	----	6
4. Noma (or Canker)	41	----	----	----	1	----	----	1	----	2	1	1	----	1	----	1	----	----	1	1	1
5. Mortification	5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
II.—Order 2. Tubercular	1,588	----	37	1	27	17	4	52	46	70	39	1	1	35	3	28	5	43	----	19	44
1. Scrofula	63	----	5	----	----	----	----	4	----	6	5	----	----	----	----	3	----	----	----	----	----
2. Tabes Mesenterica	9	----	----	----	----	----	----	2	----	1	----	----	----	----	----	1	----	----	----	----	----
3. Phthisis (Consumption of Lungs)	1,463	----	32	1	27	17	4	46	45	63	34	1	1	35	3	24	5	43	----	19	44
4. Hydrocephalus	3	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----
Class III.—Local Diseases	2,699	2	76	3	58	32	5	64	71	104	55	2	1	60	12	56	8	65	8	18	71
III.—Order 1. Nervous System	1,091	----	39	1	21	10	3	16	25	45	19	----	----	21	2	18	6	19	5	7	29
1. Cephalitis	233	----	6	----	1	2	1	5	5	7	3	----	----	6	2	6	1	2	1	1	5
2. Apoplexy	54	----	1	----	1	----	----	1	2	4	1	----	----	----	----	1	----	2	1	----	----
3. Paralysis	122	----	2	----	1	----	1	----	4	7	5	----	----	3	----	2	----	1	1	----	6
4. Insanity	14	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	2
5. Chorea	1	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
6. Epilepsy	18	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
7. Tetanus	5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1
8. Convulsions	281	----	7	1	7	4	----	6	2	8	4	----	----	6	----	2	----	5	2	1	7

TABLE XVI.—CONTINUED.

CAUSES OF DEATH.	STATE.	COUNTIES.																			
		Alcona.	Allegan.	Antrim.	Barry.	Bay.	Benzie.	Berrien.	Branch.	Calhoun.	Cass.	Charlevoix.	Chippewa.	Clinton.	Delta.	Eaton.	Emmet.	Genesee.	Gr. Traverse.	Gratiot.	Hillsdale.
9. Brain Diseases *a b*	368	----	12	----	11	4	1	4	11	19	6	----	----	6	----	7	5	9	----	5	8
III.—ORDER 2. Organs of Circulation	311	----	5	----	11	----	1	10	13	12	6	1	----	9	2	10	----	6	1	3	8
1. Pericarditis	43	----	2	----	3	----	----	1	1	2	3	----	----	1	1	4	----	2	----	----	----
2. Aneurism	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
3. Heart Diseases *a*	268	----	3	----	8	----	1	9	12	10	3	1	----	8	1	6	----	4	1	3	8
III.—ORDER 3. Respiratory Organs	631	1	21	1	12	15	----	22	17	20	13	----	1	15	5	13	2	19	1	3	16
1. Epistaxis	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1
2. Laryngitis	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
3. Bronchitis	20	----	----	----	2	----	----	2	1	----	----	----	----	----	----	----	----	----	----	----	1
4. Pleurisy	27	----	1	----	2	----	----	5	----	2	----	----	----	----	----	----	----	1	----	----	1
5. Pneumonia	405	1	15	----	7	13	----	13	7	11	10	----	----	14	3	10	----	16	1	1	8
6. Asthma	22	----	1	----	----	----	----	----	1	2	1	----	----	----	----	1	----	1	----	----	----
7. Lung Diseases *a*	156	----	4	1	1	2	----	2	8	5	2	----	1	1	2	2	2	1	----	2	5

III.—ORDER 4. Digestive Organs	480	1	16	1	9	7	----	12	9	21	11	1	----	18	3	9	----	16	1	4	11
1. Gastritis	26	1	1	----	----	1	----	----	----	----	----	----	----	----	----	2	----	1	----	----	----
2. Enteritis	187	----	7	1	2	2	----	2	3	14	6	1	----	8	2	3	----	8	1	2	1
3. Peritonitis	5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
4. Ascites	7	----	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	1	----	----	----
5. Ulceration of Intestines	8	----	----	----	1	----	----	----	----	----	----	----	----	----	1	----	----	----	----	----	2
6. Hernia *c*	16	----	1	----	----	----	----	----	1	----	----	----	----	----	----	1	----	----	----	1	1
7. Ileus *d*	8	----	----	----	1	----	----	1	1	----	----	----	----	----	----	----	----	----	----	----	1
8. Intussusception	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
9. Stricture of Intestines	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
10. Fistula	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
11. Stomach Diseases *a e*	105	----	2	----	3	1	----	6	4	1	2	----	----	1	----	1	----	1	----	1	3
12. Pancreas Diseases *a*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
13. Hepatitis	7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
14. Jaundice	22	----	----	----	----	2	----	1	----	4	1	----	----	1	----	----	----	----	----	----	----
15. Liver Diseases *a*	83	----	5	----	2	1	----	2	----	1	2	----	----	3	----	2	----	5	----	----	3
16. Spleen Diseases *a*	5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
III.—ORDER 5. Urinary Organs	110	----	3	----	2	----	1	4	6	4	3	----	----	1	----	1	----	3	----	1	5
1. Nephritis	10	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1	----	----	----

a Not otherwise distinguished.
b Includes 8 from Spotted Fever.
c Includes 1 from Hernia of Umbilicus.
d Includes 1 Obstruction of Bowels; 1 Stoppage of Bowels; 1 Stoppage between Stomach and Bowels; and 1 Strangulation of Bowels.
e Includes 40 Bowel Diseases; 10 Bilious Colic.

TABLE XVI.—CONTINUED.

CAUSES OF DEATH.	STATE.	COUNTIES.																			
		Alcona.	Allegan.	Antrim.	Barry.	Bay.	Benzie.	Berrien.	Branch.	Calhoun.	Cass.	Charlevoix.	Chippewa.	Clinton.	Delta.	Eaton.	Emmet.	Genesee.	Gr. Traverse.	Gratiot.	Hillsdale.
2. Ischuria	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
3. Nephria (Bright's Disease)	2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
4. Diabetes	29	----	----	----	1	----	1	1	3	1	----	----	----	----	----	1	----	1	----	----	2
5. Calculus (Gravel, etc.) *c*	25	----	----	----	1	----	----	----	1	----	1	----	----	----	----	----	----	----	----	----	1
6. Cystitis	7	----	----	----	----	----	----	----	1	----	2	----	----	----	----	----	----	1	----	----	1
7. Kidney Diseases *a*	36	----	2	----	----	----	----	3	1	3	----	----	----	1	----	----	----	----	----	1	1
III.—ORDER 6. Generative Organs	22	----	----	----	----	----	----	----	1	----	2	----	----	----	----	3	----	1	----	----	1
1. Ovarian Dropsy	7	----	----	----	----	----	----	----	----	----	1	----	----	----	----	1	----	1	----	----	----
2. Diseases of Uterus *a*	15	----	----	----	----	----	----	----	1	----	1	----	----	----	----	2	----	----	----	----	1
III.—ORDER 7. Organs of Locomotion	8	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1
1. Arthritis	1	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
2. Joint Diseases *a*	7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1
III.—ORDER 8. Integumentary System	46	----	1	----	2	----	----	----	----	2	1	----	----	1	----	2	----	1	----	----	----

1. Phlegmon	25	----	1	----	1	----	----	----	----	2	1	----	----	----	----	2	----	1	----	----	----
2. Ulcer	6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
3. Skin Diseases *a*	15	----	----	----	1	----	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----
CLASS IV.—Developmental Diseases	840	2	18	2	19	8	2	12	6	24	13	1	4	23	2	21	----	17	2	14	17
IV.—ORDER 1.—Dev. Diseases of Children	374	2	5	2	6	4	2	4	1	11	4	1	1	6	1	7	----	5	1	7	3
1. Still-born	226	2	4	1	4	2	2	2	1	9	4	1	1	5	1	5	----	2	----	6	3
2. Premature Birth and Infantile Debility	56	----	----	1	2	1	----	----	----	----	----	----	----	1	----	1	----	2	1	----	----
3. Cyanosis	2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
4. Spina Bifida	2	----	1	----	----	----	----	----	----	----	----	----	----	----	----	1	----	----	----	----	----
5. Other Malformations	6	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----
6. Teething	82	----	----	----	----	1	----	1	----	2	----	----	----	----	----	----	----	1	----	1	----
IV.—ORDER 2. Developmental Diseases of Women	153	----	6	----	5	1	----	5	2	5	2	----	----	7	1	5	----	4	----	3	4
1. Paramenia	3	----	1	----	----	----	----	----	----	----	----	----	----	----	----	1	----	----	----	----	----
2. Childbirth *b*	150	----	5	----	5	1	----	5	2	5	2	----	----	7	1	4	----	4	----	3	4
IV.—ORDER 3. Developmental Diseases of Old People	313	----	7	----	8	3	----	3	3	8	7	----	3	10	----	9	----	8	1	4	10
1. Old Age	313	----	7	----	8	3	----	3	3	8	7	----	3	10	----	9	----	8	1	4	10
IV.—ORDER 4. Diseases of Nutrition	------	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1. Atrophy and Debility	------	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

a Not otherwise distinguished.
b Includes 8 from Puerperal convulsions.
c Includes 24 from Gravel.

TABLE XVI.—CONTINUED.

CAUSES OF DEATH.	STATE.	COUNTIES.																			
		Alcona.	Allegan.	Antrim.	Barry.	Bay.	Benzie.	Berrien.	Branch.	Calhoun.	Cass.	Charlevoix.	Chippewa.	Clinton.	Delta.	Eaton.	Emmet.	Genesee.	Gd. Traverse.	Gratiot.	Hillsdale.
CLASS V.—Violent Deaths	495	1	14	----	11	16	1	12	9	21	8	2	1	15	3	8	2	6	2	3	18
V.—ORDER 1. Accident or Negligence	445	1	12	----	11	15	1	10	8	16	5	2	1	13	3	8	2	6	2	3	16
1. Fractures and Contusions	30	----	1	----	----	----	----	----	2	4	----	----	----	2	2	----	----	----	----	----	1
2. Wounds	22	----	1	----	1	----	----	----	----	2	----	----	----	1	----	2	----	----	----	----	1
3. Burns and Scalds	62	----	----	----	----	3	1	----	2	1	3	----	----	3	----	----	----	1	----	----	2
4. Poison	20	----	1	----	----	----	----	----	1	----	----	----	----	1	----	----	----	----	----	1	----
5. Drowning	107	----	----	----	3	9	----	7	----	2	----	1	1	1	----	2	----	2	----	----	2
6. Suffocation	12	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	1	1	----	1
7. Otherwise *a*	192	1	9	----	7	2	----	3	3	7	2	1	----	5	1	4	2	2	1	2	9
V.—ORDER 2. In Battle	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
V.—ORDER 3. Homicide *b*	5	----	----	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----
V.—ORDER 4. Suicide	34	----	2	----	----	1	----	2	1	4	----	----	----	2	----	----	----	----	----	----	2
1. Wounds	3	----	2	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

2. Poison	2	----	----	----	----	----	----	1	1	----	----	----	----	----	----	----	----	----	----	----	----
3. Drowning	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
4. Hanging	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
5. Otherwise, and not specified	29	----	----	----	----	----	----	1	----	4	----	----	----	2	----	----	----	----	----	----	2
V.—Order 5. Execution	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1. Hanging	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
V.—Order 6. Violent Deaths not included above *c*	11	----	----	----	----	----	----	----	----	1	2	----	----	----	----	----	----	----	----	----	----
Sudden, cause unknown	5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Cause not specified *d*	1,226	1	28	2	26	21	----	40	19	35	17	1	7	24	12	19	15	36	4	14	21

a Includes 177 from various casualties,—nature not always specified; 10 Hemorrhage; 1 Secondary Hemorrhage after Amputation; 1 Hemorrhage of Leg after Amputation; 1 Hemorrhage from Umbilicus; and 1 from overdose of Chloroform.

b Includes 4 from Murder.

c Includes 1 from Amputation; 1 Amputation of Leg; 1 Chloroform given for Amputation; 1 Operation for Tumor; and 7 Lightning.

d Includes 15 from Throat Disease; 4 from Putrid Sore Throat; 1 from Ulceration of Throat; 33 from Inflammation; 5 from Cold.

TABLE XVI.—CONTINUED.

CAUSES OF DEATH.	COUNTIES.																				
	Huron.	Ingham.	Ionia.	Iosco.	Isabella.	Jackson.	Kalamazoo.	Kalkaska.	Kent.	Lake.	Lapeer.	Leelanaw.	Lenawee.	Livingston.	Macomb.	Manistee.	Marquette.	Mason.	Mecosta.	Menominee.	Midland.
2. Diseases of Uterus *a*	1	----	----	----	----	----	----	----	----	----	----	----	----	1	1	----	----	----	----	----	1
III.—ORDER 7. Organs of Locomotion	----	1	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----
1. Arthritis	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
2. Joint Diseases *a*	----	1	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----
III.—ORDER 8. Integumentary System	----	1	1	----	----	3	----	----	3	----	----	----	1	4	1	1	1	----	1	----	----
1. Phlegmon	----	----	1	----	----	1	----	----	1	----	----	----	1	1	----	----	1	----	----	----	----
2. Ulcer	----	----	----	----	----	----	----	----	1	----	----	----	----	----	1	1	----	----	----	----	----
5. Skin Diseases *a*	----	1	----	----	----	2	----	----	1	----	----	----	----	3	----	----	----	----	1	----	----
CLASS IV.—Developmental Diseases	5	22	19	1	3	19	30	1	35	----	12	4	15	11	23	2	32	3	5	----	1
IV.—ORDER 1. Dev. Diseases of Children	1	6	9	1	2	9	10	----	12	----	4	4	4	5	10	----	27	3	----	----	----
1. Still-born	1	6	9	----	2	5	5	----	3	----	2	1	4	4	7	----	3	1	----	----	----
2. Premature Birth and Infantile Debility	----	----	----	----	----	1	3	----	5	----	2	----	----	1	1	----	18	1	----	----	----
3. Cyanosis	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	2	----	----	----	----

4. Spina Bifida	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
5. Other Malformations	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
6. Teething	----	----	----	1	----	3	2	----	4	----	----	3	----	----	2	----	4	1	----	----	----
IV.—Order 2. Developmental Diseases of Women	2	2	2	----	----	2	7	----	4	----	3	----	1	3	2	1	3	----	3	----	1
1. Paramenia	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----
2. Childbirth *b*	2	2	2	----	----	2	6	----	4	----	3	----	1	3	2	1	3	----	3	----	1
IV.—Order 3. Developmental Diseases of Old People	2	14	8	----	1	8	13	1	19	----	5	----	10	3	11	1	2	----	2	----	----
1. Old Age	2	14	8	----	1	8	13	1	19	----	5	----	10	3	11	1	2	----	2	----	----
IV.—Order 4. Diseases of Nutrition	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1. Atrophy and Debility	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Class V. Violent Deaths	5	10	12	2	----	12	13	----	17	----	10	5	14	9	8	6	10	2	6	----	6
V.—Order 1. Accident or Negligence	5	8	11	1	----	11	11	----	15	----	9	5	13	7	7	6	10	2	6	----	5
1. Fractures and Contusions	----	----	2	----	----	----	1	----	2	----	----	----	1	----	1	----	----	----	----	----	----
2. Wounds	----	----	----	----	----	----	3	----	----	----	----	----	1	1	----	----	----	----	----	----	----
3. Burns and Scalds	1	1	2	----	----	2	----	----	1	----	1	3	----	----	2	----	----	----	2	----	----
4. Poison *c*	----	----	----	----	----	----	*c* 3	----	1	----	1	----	----	----	----	----	----	----	----	----	----
5. Drowning	3	2	5	----	----	3	----	----	3	----	2	----	2	1	----	3	1	1	----	----	4

a Not otherwise distinguished.
b Total for State includes 8 from Puerperal Convulsions.
c Includes 1 from overdose of Chloroform.

TABLE XVI.—CONTINUED.

CAUSES OF DEATH.	COUNTIES.																				
	Huron.	Ingham.	Ionia.	Iosco.	Isabella.	Jackson.	Kalamazoo.	Kalkaska.	Kent.	Lake.	Lapeer.	Leelanaw.	Lenawee.	Livingston.	Macomb.	Manistee.	Marquette.	Mason.	Mecosta.	Menominee.	Midland.
6. Suffocation	----	1	1	----	----	----	----	----	----	----	----	----	2	1	----	1	----	----	----	----	----
7. Otherwise *a*	1	4	1	1	----	6	4	----	8	----	5	2	7	4	4	2	9	1	4	----	1
V.—ORDER 2. In Battle	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
V.—ORDER 3. Homicide *b*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
V.—ORDER 4. Suicide	----	2	----	1	----	1	2	----	2	----	----	----	1	1	----	----	----	----	----	----	----
1. Wounds	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
2. Poison	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
3. Drowning	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
4. Hanging	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
5. Otherwise, and not specified	----	2	----	1	----	1	2	----	2	----	----	----	1	1	----	----	----	----	----	----	----
V.—ORDER 5. Execution	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1. Hanging	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

V.—ORDER 6. Violent Deaths, not included above *c*	----	----	1	----	----	----	----	----	----	----	1	----	----	1	1	----	----	----	----	----	1
Sudden, cause unknown	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Cause not specified *d*	7	21	24	2	6	25	21	1	72	----	17	11	30	23	29	8	30	2	14	2	4

a Total for State includes 177 from various casualties,—nature not always specified: 10 Hemorrhage; 1 Secondary Hemorrhage after Amputation; 1 Hemorrhage of Leg after Amputation; and 1 Hemorrhage from Umbilicus.

b Total for State includes 4 from Murder.

c Total for State includes 1 from Amputation; 1 Amputation of Leg; 1 Chloroform given for Amputation; 1 Operation for Tumor; and 7 Lightning.

d Total for State includes 15 from Throat Disease; 4 from Putrid Sore Throat; 1 from Ulceration of Throat; 33 from Inflammation; 5 from Cold.

TABLE XVI.—CONTINUED.

CAUSES OF DEATH.	COUNTIES.																			
	Monroe.	Montcalm.	Muskegon.	Newaygo.	Oakland.	Oceana.	Ontonagon.	Osceola.	Ottawa.	Saginaw.	Sanilac.	Schoolcraft.	Shiawassee.	St. Clair.	St. Joseph.	Tuscola.	Van Buren.	Washtenaw.	Wayne.	Wexford.
All causes	274	127	159	35	255	99	16	10	261	382	103	8	138	299	193	84	259	311	1628	12
Specified causes *a*	255	118	130	25	224	84	14	8	218	321	88	8	119	259	169	73	238	283	1472	12
CLASSES.																				
I.—Zymotic Diseases	107	50	51	7	55	20	1	....	112	124	32	4	36	73	46	25	95	88	552	2
II.—Constitutional Diseases	50	19	30	9	63	28	6	4	42	61	13	....	33	60	38	13	53	61	314	3
III.—Local Diseases	63	32	33	7	78	28	4	3	47	95	27	3	36	63	64	21	63	106	372	3
IV.—Developmental Diseases	28	10	6	1	17	2	2	....	12	17	12	....	10	35	14	9	15	19	177	4
V.—Violent Deaths	7	2	10	1	11	6	1	1	5	24	4	1	4	28	7	5	12	9	57	....
ORDERS.																				
I.—1. Miasmatic Diseases	104	49	51	7	54	20	1	....	110	124	31	4	35	71	46	25	93	87	539	2
2. Enthetic Diseases	2	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	6	....
3. Dietic Diseases	1	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	5	....
4. Parasitic Diseases	....	1	....	....	1	....	....	....	....	....	1	....	....	2	....	....	2	1	2	....
II.—1. Diathetic Diseases	8	4	10	1	17	5	3	....	14	14	4	....	8	18	7	4	12	14	93	....

2. Tubercular Diseases	42	15	20	3	46	28	3	4	26	47	9	----	25	48	31	9	41	47	221	3
III.—1. Diseases of Nervous System	28	12	17	2	39	12	3	2	22	27	7	----	16	19	24	3	31	36	184	1
2. Diseases of Organs of Circulation	6	----	2	----	11	2	----	----	----	14	2	----	1	7	7	1	3	17	53	1
3. Diseases of Respiratory Organs	13	10	9	4	9	6	----	----	10	29	10	----	10	13	17	8	16	22	72	----
4. Diseases of Digestive Organs	14	7	3	1	11	7	----	1	12	20	5	2	5	21	13	5	11	17	50	1
5. Diseases of Urinary Organs	1	3	2	----	6	1	----	----	1	3	1	1	1	2	2	1	2	7	7	----
6. Diseases of Generative Organs	----	----	----	----	1	----	----	----	----	----	1	----	----	----	----	3	----	2	1	----
7. Diseases of Organs of Locomotion	1	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	2	----
8. Diseases of Integumentary System	----	----	----	----	1	----	1	----	1	2	1	----	3	1	1	----	----	5	3	----
IV.—1. Dev. Diseases of Children	11	6	6	----	2	2	2	----	3	14	4	----	5	11	3	7	3	----	112	3
2. Dev. Diseases of Adults	6	2	----	1	2	----	----	----	1	1	4	----	1	6	3	----	4	6	29	1
3. Dev. Diseases of Old People	11	2	----	----	13	----	----	----	8	2	4	----	4	18	8	2	8	13	36	----
4. Diseases of Nutrition	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
V.—1. Accident or Negligence	5	2	10	1	11	6	1	1	5	22	2	1	4	25	7	5	11	9	50	----
2. Battle	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
3. Homicide	----	----	----	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	3	----
4. Suicide	2	----	----	----	----	----	----	----	----	2	1	----	----	1	----	----	1	----	3	----
5. Execution	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
6. Violent Deaths	----	----	----	----	----	----	----	----	----	----	----	----	----	2	----	----	----	----	1	----
Sudden Deaths (causes unascertained)	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5	----
Causes not specified	19	14	29	10	31	15	2	2	43	61	15	----	19	40	24	11	21	28	151	----

a Includes Still-born.

TABLE XVI.—CONTINUED.

CAUSES OF DEATH.	COUNTIES.																			
	Monroe.	Montcalm.	Muskegon.	Newaygo.	Oakland.	Oceana.	Ontonagon.	Osceola.	Ottawa.	Saginaw.	Sanilac.	Schoolcraft.	Shiawassee.	St. Clair.	St. Joseph.	Tuscola.	Van Buren.	Washtenaw.	Wayne.	Wexford.
CLASS 1.—Zymotic	107	50	51	7	55	20	1	----	112	124	82	4	86	73	46	25	95	88	552	2
I.—ORDER 1. Miasmatic	104	49	51	7	54	20	1	----	110	124	81	4	85	71	46	25	93	87	539	2
1. Small-pox *a*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	9	----
2. Measles	----	2	5	----	----	2	----	----	1	----	1	----	----	----	----	----	----	1	3	----
3. Scarlatina	18	12	9	2	6	----	1	----	29	3	1	----	1	14	4	6	15	11	163	1
4. Diphtheria	10	1	----	1	3	----	----	----	3	8	4	----	----	5	----	1	3	3	22	----
5. Quinsy	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1	----
6. Croup	3	----	2	----	2	----	----	----	4	5	2	----	2	10	1	1	1	2	32	----
7. Whooping Cough	6	1	----	----	1	3	----	----	9	3	2	----	1	4	1	1	4	4	33	----
8. Typhus *b*	33	15	12	1	20	9	----	----	26	24	6	----	17	13	17	5	23	11	46	----
9. Erysipelas	2	1	----	----	3	----	----	----	1	1	----	----	3	5	1	----	----	3	6	----
10. Metria (Puerperal Fever)	1	1	----	----	2	----	----	----	----	1	----	----	1	----	----	----	2	----	----	----
11. Carbuncle	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1	----
12. Influenza	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

13. Dysentery	7	4	4	1	6	1	----	----	26	28	3	----	2	6	7	6	3	21	12	1
14. Diarrhœa	14	7	5	----	1	2	----	----	4	25	8	2	1	4	2	3	7	14	161	----
15. Cholera Infantum	3	----	2	----	2	1	----	----	1	10	1	2	1	5	4	----	18	8	30	----
16. Cholera *c*	1	----	----	----	3	----	----	----	1	1	----	----	1	----	2	----	2	1	10	----
17. Ague *d*	6	2	7	2	1	1	----	----	2	8	----	----	3	2	4	----	7	4	6	----
18. Remittent Fever *e*	----	2	5	----	2	1	----	----	2	5	1	----	2	1	1	1	3	1	2	----
19. Rheumatism	----	1	----	----	2	----	----	----	1	2	2	----	----	2	2	1	----	3	2	----
I.—Order 2. Enthetic	2	----	----	----	----	----	----	----	----	----	----	----	1	----	----	----	----	----	6	----
1. Syphilis	2	----	----	----	----	----	----	----	----	----	----	----	1	----	----	----	----	----	6	----
2. Stricture of Urethra	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
3. Hydrophobia	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
4. Glanders	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I.—Order 3. Dietic	1	----	----	----	----	----	----	----	2	----	----	----	----	----	----	----	----	----	5	----
1. Privation	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
2. Purpura and Scurvy	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1	----
3. Delirium Tremens } (Alchoholism)	1	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	1	----
4. Intemperance } (Alchoholism)	--	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	3	----

a Total for State includes 1 Chicken-pox, and 1 Vaccination.

b Total for State includes 574 Typhoid Fever; 1 Typhus Fever; 126 Fever unspecified; 1 continued Fever; 1 Blood Poisoning; 1 Malignant Fever.

c Total for State includes 30 Cholera Morbus.

d Total for State includes 88 Congestive Chills; 59 Intermittent Fever; 8 Congestive Fever; 7 Worm Fits.

e Total for State includes 65 Bilious Fever.

TABLE XVI.—CONTINUED.

CAUSES OF DEATH.	COUNTIES.																			
	Monroe.	Montcalm.	Muskegon.	Newaygo.	Oakland.	Oceana.	Ontonagon.	Osceola.	Ottawa.	Saginaw.	Sanilac.	Schoolcraft.	Shiawassee.	St. Clair.	St. Joseph.	Tuscola.	Van Buren.	Washtenaw.	Wayne.	Wexford.
I.—ORDER 4. Parasitic	----	1	----	----	1	----	----	----	----	----	1	----	----	2	----	----	2	1	2	----
1. Thrush	----	1	----	----	1	----	----	----	----	----	----	----	----	1	----	----	2	1	2	----
2. Worms	----	----	----	----	----	----	----	----	----	----	1	----	----	1	----	----	----	----	----	----
CLASS II.—Constitutional	50	19	30	9	63	28	6	4	42	61	13	----	38	60	38	13	53	61	314	3
II.—ORDER 1. Diathetic	8	4	10	1	17	5	3	----	14	14	4	----	8	18	7	4	12	14	93	----
1. Gout	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
2. Dropsy and Anæmia	4	2	6	1	10	4	3	----	12	9	3	----	5	9	5	2	10	10	74	----
3. Cancer	4	1	----	----	6	----	----	----	2	3	1	----	1	7	2	2	2	2	19	----
4. Noma (or Canker)	----	----	4	----	1	1	----	----	----	2	----	----	2	1	----	----	----	2	----	----
5. Mortification	----	1	----	----	----	----	----	----	----	----	----	----	----	1	----	----	----	----	----	----
II.—ORDER 2. Tubercular	42	15	20	8	46	23	3	4	28	47	9	----	25	42	31	9	41	47	221	3
1. Scrofula	1	2	1	1	----	1	----	----	1	----	----	----	2	----	----	1	1	3	10	----
2. Tabes Mesenterica	----	----	----	----	----	----	----	----	----	3	----	----	----	----	----	----	----	----	----	----
3. Phthisis (Consumption of Lungs)	41	13	18	7	46	22	3	4	27	44	9	----	23	42	31	8	40	44	211	3

Hydrocephalus	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CLASS III.—Local Diseases	63	32	33	7	78	28	4	3	47	95	27	3	36	63	64	21	63	106	372	3
III.—ORDER 1. Nervous System	28	12	17	2	39	12	2	2	22	27	7	----	16	19	24	3	31	36	184	1
1. Cephalitis	6	4	3	1	12	3	1	----	4	5	----	----	5	8	3	1	8	6	36	----
2. Apoplexy	----	1	----	----	1	----	----	1	2	2	----	----	----	----	2	----	2	6	6	----
3. Paralysis	1	----	2	----	4	2	----	----	1	3	1	----	4	2	6	1	6	3	15	----
4. Insanity	----	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	1	1	----
5. Chorea	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
6. Epilepsy	1	----	----	----	----	----	----	----	----	2	----	----	----	----	2	1	1	----	----	1
7. Tetanus	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	2	----
8. Convulsions	12	3	6	1	9	5	2	1	9	6	3	----	----	5	2	----	1	7	75	----
9. Brain Diseases *a b*	8	4	6	----	13	2	----	----	5	9	3	----	7	4	9	----	13	13	49	----
III.—ORDER 2. Organs of Circulation	6	----	2	----	11	2	----	----	----	14	2	----	1	7	7	1	3	17	53	1
1. Pericarditis	----	----	----	----	----	----	----	----	----	1	----	----	----	3	2	----	----	----	8	1
2. Aneurism	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
3. Heart Diseases *a*	6	----	2	----	11	2	----	----	----	13	2	----	1	4	5	1	3	17	45	----
III.—ORDER 3. Respiratory Organs	13	10	9	4	9	6	----	----	10	29	10	----	10	13	17	8	16	22	72	----
1. Epistaxis	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
2. Laryngitis	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

a Not otherwise distinguished.

b Total for State includes 8 from Spotted Fever.

TABLE XVI.—CONTINUED.

CAUSES OF DEATH.	COUNTIES.																			
	Monroe.	Montcalm.	Muskegon.	Newaygo.	Oakland.	Oceana.	Ontonagon.	Osceola.	Ottawa.	Saginaw.	Sanilac.	Schoolcraft.	Shiawassee.	St. Clair.	St. Joseph.	Tuscola.	Van Buren.	Washtenaw.	Wayne.	Wexford.
3. Bronchitis	----	----	----	1	----	----	----	----	----	----	----	----	1	1	1	1	----	1	4	----
4. Pleurisy	----	----	----	----	----	----	----	----	----	1	----	----	1	1	3	----	----	----	2	----
5. Pneumonia	6	8	7	----	5	6	----	----	5	20	8	----	4	7	8	6	14	18	37	----
6. Asthma	3	----	2	----	1	----	----	----	----	1	----	----	----	----	----	----	----	1	4	----
7. Lung Diseases *a*	4	2	----	3	3	----	----	----	5	7	2	----	4	4	5	1	2	7	25	----
III.—ORDER 4. Digestive Organs	14	7	3	1	11	7	----	1	12	20	5	2	5	21	13	5	11	17	50	1
1. Gastritis	----	1	----	----	1	----	----	----	3	1	----	1	----	1	1	----	3	----	1	----
2. Enteritis	5	4	2	1	4	----	----	----	1	4	3	1	2	7	3	2	4	6	23	1
3. Peritonitis	----	----	----	----	----	1	----	----	----	----	----	----	----	1	----	----	----	----	----	----
4. Ascites	----	----	----	----	----	----	----	----	----	----	----	----	----	----	3	----	----	----	----	----
5. Ulceration of Intestines	----	----	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----
6. Hernia *b*	1	----	----	----	1	----	----	----	1	----	----	----	----	----	----	----	----	3	----	----
7. Ileus *c*	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1	----	----
8. Intussusception	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

9. Stricture of Intestines	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
10. Fistula	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
11. Stomach Diseases *a d*	3	1	1	----	4	3	----	1	3	7	2	----	----	4	1	----	3	6	18	----
12. Pancreas Diseases *a*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
13. Hepatitis	----	----	----	----	----	----	----	----	1	3	----	----	----	----	----	----	1	----	----	----
14. Jaundice	----	----	----	----	----	----	----	----	----	1	----	----	1	1	2	1	----	----	2	----
15. Liver Diseases *a*	4	----	----	----	1	3	----	----	3	3	----	----	1	7	3	2	----	1	6	----
16. Spleen Diseases *a*	1	----	----	----	----	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----
III.—Order 5. Urinary Organs	1	3	2	----	6	1	----	----	1	3	1	1	1	2	2	1	2	7	7	----
1. Nephritis	----	----	----	----	1	----	----	----	1	----	----	----	----	----	----	1	----	1	----	----
2. Ischuria	----	----	----	----	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----
3. Nephria (Bright's Disease)	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1	----	----	----	----	----
4. Diabetes	1	2	----	----	----	----	----	----	----	----	1	----	----	----	----	----	1	1	2	----
5. Calculus (Gravel, etc.) *e*	----	1	1	----	2	----	----	----	----	2	----	----	1	2	1	----	----	3	2	----
6. Cystitis	----	----	----	----	----	----	----	----	----	1	----	----	----	----	----	----	1	----	----	----
7. Kidney Diseases *a*	----	----	1	----	3	1	----	----	----	----	----	----	----	----	----	----	----	2	3	----
III.—Order 6. Generative Organs	----	----	----	----	1	----	----	----	----	----	1	----	----	----	----	3	----	2	1	----
1. Ovarian Dropsy	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1	1	----

a Not otherwise distinguished.
b Total for State includes 1 from Hernia of Umbilicus.
c Total for State includes 1 Obstruction of Bowels; 1 Stoppage of Bowels; 1 Stoppage between Stomach and Bowels; and 1 Strangulation of Bowels.
d Total for State includes 40 Bowel Diseases; 10 Bilious Colic.
e Total for State includes 24 from Gravel.

TABLE XVI.—CONTINUED.

CAUSES OF DEATH.	COUNTIES.																			
	Monroe.	Montcalm.	Muskegon.	Newaygo.	Oakland.	Oceana.	Ontonagon.	Osceola.	Ottawa.	Saginaw.	Sanilac.	Schoolcraft.	Shiawassee.	St. Clair.	St. Joseph.	Tuscola.	Van Buren.	Washtenaw.	Wayne.	Wexford.
2. Diseases of Uterus *a*	----	----	----	----	1	----	----	----	----	----	1	----	----	----	----	3	----	1	----	----
III.—ORDER 7. Organs of Locomotion	1	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	2	----
1. Arthritis	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
2. Joint Diseases *a*	1	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	2	----
III.—ORDER 8. Integumentary System	----	----	----	----	1	----	1	----	1	2	1	----	3	1	1	----	----	5	3	----
1. Phlegmon	----	----	----	----	1	----	----	----	1	1	1	----	2	1	----	----	----	2	2	----
2. Ulcer	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	2	----	----
3. Skin Diseases *a*	----	----	----	----	----	----	----	----	----	1	----	----	1	----	1	----	----	1	1	----
CLASS IV. Developmental Diseases	28	10	6	1	17	2	2	----	12	17	12	----	10	35	14	9	15	19	177	4
IV.—ORDER 1. Dev. Diseases of Children	11	6	6	----	2	2	2	----	8	14	4	----	5	11	3	7	3	----	112	3
1. Still-born	9	6	2	----	2	2	----	----	2	9	3	----	5	8	3	6	2	----	58	1
2. Premature Birth and Infantile Debility	----	----	----	----	----	----	2	----	----	----	----	----	----	2	----	1	1	----	7	2
3. Cyanosis	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

4. Spina Bifida	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
5. Other Malformations	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	4	----
6. Teething	1	----	4	----	----	----	----	----	1	5	1	----	----	1	----	----	----	----	43	----
IV.—Order 2. Developmental Diseases of Women	6	2	----	1	2	----	----	----	1	1	4	----	1	6	3	----	4	6	29	1
1. Paramenia	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
2. Childbirth *b*	6	2	----	1	2	----	----	----	1	1	4	----	1	6	3	----	4	6	29	1
IV.—Order 3. Developmental Diseases of Old People	11	2	----	----	13	----	----	----	8	2	4	----	4	18	8	2	8	13	36	----
1. Old Age	11	2	----	----	13	----	----	----	8	2	4	----	4	18	8	2	8	13	36	----
IV.—Order 4. Diseases of Nutrition	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1. Atrophy and Debility	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Class V.—Violent Deaths	7	2	10	1	11	6	1	1	5	24	4	1	4	28	7	5	12	9	57	----
V.—Order 1. Accident or Negligence	5	2	10	1	11	6	1	1	5	22	2	1	4	25	7	5	11	9	50	----
1. Fractures and Contusions	----	----	----	----	----	----	----	----	----	1	----	----	----	1	1	----	----	2	6	----
2. Wounds	----	1	1	----	2	----	----	----	----	2	----	----	----	1	----	1	----	----	1	----
3. Burns and Scalds	3	1	----	----	1	----	----	----	1	5	----	----	----	2	3	----	1	1	13	----
4. Poison	----	----	1	----	1	----	----	----	----	----	----	----	2	2	----	2	1	1	1	----
5. Drowning	----	----	3	1	1	----	1	----	1	8	1	1	----	13	----	----	4	1	12	----

a Not otherwise distinguished.

b Total for State includes 8 from Puerperal Convulsions.

TABLE XVI.—CONTINUED.

CAUSES OF DEATH.	COUNTIES.																			
	Monroe.	Montcalm.	Muskegon.	Newaygo.	Oakland.	Oceana.	Ontonagon.	Osceola.	Ottawa.	Saginaw.	Sanilac.	Schoolcraft.	Shiawassee.	St. Clair.	St. Joseph.	Tuscola.	Van Buren.	Washtenaw.	Wayne.	Wexford.
6. Suffocation	1	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
7. Otherwise *a*	1	----	4	----	6	6	----	1	3	6	1	----	2	6	3	2	5	4	17	----
V.—ORDER 2. In Battle	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
V.—ORDER 3. Homicide *b*	----	----	----	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	3	----
V.—ORDER 4. Suicide	2	----	----	----	----	----	----	----	----	2	1	----	----	1	----	----	1	----	3	----
1. Wounds	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
2. Poison	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
3. Drowning	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
4. Hanging	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
5. Otherwise, and not specified	2	----	----	----	----	----	----	----	----	2	1	----	----	1	----	----	1	----	3	----
V.—ORDER 5. Execution	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1. Hanging	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

V.—ORDER 6. Violent Deaths, not included above *c*	----	----	----	----	----	----	----	----	----	----	----	----	----	2	----	----	----	----	1	----
Sudden, cause unknown	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5	----
Cause not specified *d*	19	14	29	10	81	15	2	2	48	61	15	----	19	40	24	11	21	26	151	----

a Total for State includes 177 from various casualties,—nature not always specified; 10 Hemorrhage; 1 Secondary Hemorrhage after Amputation; 1 Hemorrhage of Leg after Amputation; and 1 Hemorrhage from Umbilicus.

b Total for State includes 4 from Murder.

c Total for State includes 1 from Amputation; 1 Amputation of Leg; 1 Chloroform given for Amputation; 1 Operation for Tumor; and 7 Lightning.

d Total for State includes 15 from Throat Disease; 4 from Putrid Sore Throat; 1 from Ulceration of Throat; 33 from Inflammation; 5 from Cold.

TABLE XVII.—CAUSES OF DEATH—ARRANGED ALPHABETICALLY.

Exhibiting, by Sex, by Months, by Specified Causes, and by Ages, in Periods of Years, the Number of Persons Returned as having Died during the Year ending December 31st, 1870; and also, by Sex, and by Specified Causes, the Number of Persons Returned as having Died during the Year 1869 (Still-births included).

SEX.	MONTHS, 1870.													YEARS.		CAUSES OF DEATH.	AGES.											
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	1870.	1869.		Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Unknown.
Totals...	421	553	724	678	689	754	1084	1473	1363	1132	933	927	35	10766	9145	All Causes.	4585	687	359	472	974	737	608	647	676	607	271	198
Males....	225	322	372	329	348	383	578	761	708	594	483	477	14	5589	4797	" "	2501	307	169	182	419	295	324	404	394	352	148	94
Females.	195	229	350	347	339	369	506	707	651	532	448	449	18	5140	4306	" "	2054	380	190	290	555	441	284	243	281	255	123	94
Unkno'n	1	2	2	2	2	2	5	5	4	6	2	1	3	37	43	" "	30	...	...	...	...	1	...	...	1	...	...	5
Females.	2	...	...	...	...	1	2	...	1	...	...	...	...	6	7	Abortion	...	...	...	...	...	5	...	1	...	...	...	...
Totals...	...	1	...	...	1	...	...	...	...	1	...	...	...	3	...	Abscess of Abdomen	...	...	...	...	...	1	1	...	1	...	...	...
Males....	...	1	...	...	1	...	...	...	...	...	...	...	...	2	...	" "	...	...	...	...	...	1	...	...	1	...	...	...
Females	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	" "	...	...	...	...	1	...	...	...	...	...	...	...
Males....	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	Abscess of Back	...	...	...	...	1	...	...	...	...	...	...	...
Totals...	...	...	...	...	1	...	1	...	...	1	1	...	...	4	...	Abscess of Brain	...	1	1	...	...	1	...	...	1	...	...	...
Males....	...	...	...	...	...	...	1	...	...	1	1	...	...	3	...	" "	...	1	1	...	...	...	...	...	1	...	...	...
Females.	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	" "	...	...	...	...	...	1	...	...	...	...	...	...

Totals	---	1	1	---	---	---	---	1	1	---	---	---	---	4	---	Abscess of Head	3	---	---	1	---	---	---	---	---	---	---	---
Males	---	1	---	---	---	---	---	1	1	---	---	---	---	3	---	" "	2	---	---	1	---	---	---	---	---	---	---	---
Females	---	---	1	---	---	---	---	---	---	---	---	---	---	1	---	" "	1	---	--	---	---	---	---	---	---	---	---	---
Totals	---	---	---	1	---	---	---	1	2	---	---	---	---	4	7	Abscess of Liver	---	---	---	---	---	---	---	2	---	2	---	---
Males	---	---	---	---	---	---	---	1	1	---	---	---	---	2	4	" "	---	---	---	---	---	---	---	---	---	2	---	---
Females	---	---	---	1	---	---	---	---	1	---	---	---	---	2	3	" "	---	---	---	---	---	---	---	2	---	---	---	---
Males	---	1	---	---	---	---	---	---	---	---	---	---	---	1	2	Abscess of Lungs	---	---	---	---	---	---	---	1	---	---	---	---
Totals	---	1	---	---	---	---	1	---	1	---	---	1	---	4	---	Abscess in Side	---	---	---	---	---	2	---	1	1	---	---	---
Males	---	---	---	---	---	---	1	---	---	---	---	1	---	2	---	" "	---	---	---	---	---	1	---	1	---	---	---	---
Females	---	1	---	---	---	---	---	---	1	---	---	---	---	2	---	" "	---	---	---	---	---	1	---	---	1	---	---	---
Totals	1	---	---	3	1	1	3	3	---	---	1	---	---	13	16	Abscess	3	---	---	1	4	1	1	1	1	---	---	1
Males	---	---	---	2	1	1	1	---	---	2	---	---	---	7	11	"	3	---	---	1	1	---	---	1	1	---	---	---
Females	1	---	---	1	---	---	2	1	---	---	1	---	---	6	5	"	---	---	---	---	3	1	1	---	---	---	---	1
Males	---	---	---	---	---	---	---	---	1	---	---	1	---	2	---	Amputation *a*	---	---	---	---	---	1	---	1	---	---	---	---
Totals	3	2	1	2	7	7	4	4	6	7	5	6	---	54	65	Apoplexy	1	---	---	---	5	7	9	9	11	8	4	---
Males	1	1	1	1	7	3	2	2	6	5	3	3	---	35	40	"	1	---	---	---	3	4	7	4	7	6	3	---
Females	2	1	---	1	---	4	2	2	---	2	2	3	---	19	25	"	---	---	---	---	2	3	2	5	4	2	1	---
Males	---	---	---	---	---	---	---	---	---	1	---	---	---	1	---	Aphthæ	1	---	---	---	---	---	---	---	---	---	---	---
Totals	1	2	---	2	2	2	---	4	5	1	2	1	---	22	24	Asthma	2	---	---	---	1	1	2	4	5	5	1	1
Males	1	1	---	---	---	1	---	2	3	1	2	---	---	11	20	"	---	---	---	---	---	---	2	4	1	3	1	---

a 1 Amputation of Leg.
NOTE—All foot-notes to this table apply to deaths in 1870.

TABLE XVII.—CONTINUED.

SEX.	MONTHS, 1870.													YEARS.		CAUSES OF DEATH.	AGES.											
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	1870.	1869.		Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Unknown.
Females	...	1	...	2	2	1	...	2	2	...	...	1	...	11	4	Asthma	2	...	...	...	1	1	...	...	4	2	...	1
Males	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	Blood Poisoning	...	...	...	...	...	1	...	...	...	...	...	...
Totals	5	1	1	5	1	2	4	4	6	6	1	4	...	40	45	Bowel Disease	24	1	1	2	2	...	3	4	1	2	...	...
Males	4	1	...	4	...	2	2	...	2	4	1	3	...	28	23	" "	13	...	...	1	1	...	3	4	...	1	...	...
Females	1	...	1	1	1	...	2	4	4	2	...	1	...	17	22	" "	11	1	1	1	1	...	...	...	1	1	...	...
Totals	1	1	...	...	1	...	1	...	...	...	...	...	...	4	...	Bowel, Obstruction of, *a*	...	...	1	...	...	...	1	1	...	...	1	...
Males	1	1	...	...	1	...	...	...	...	...	...	...	...	3	...	" "	...	...	1	...	...	...	...	1	...	...	1	...
Females	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	" "	...	...	...	...	...	...	1	...	...	...	...	...
Totals	5	11	11	10	8	10	26	42	41	20	14	14	2	214	204	Brain Disease	128	13	14	12	7	9	8	10	7	4	...	2
Males	3	8	9	9	4	5	11	29	28	8	10	8	...	132	111	" "	83	5	6	5	5	7	3	8	5	4	...	1
Females	2	3	2	1	4	5	15	13	13	12	4	6	2	82	93	" "	45	8	8	7	2	2	5	2	2	...	...	1
Totals	...	2	1	3	2	1	1	1	...	4	...	...	...	15	4	Brain Softening	2	3	...	1	2	...	1	1	3	2	...	...
Males	...	2	...	3	1	...	...	...	...	3	...	...	...	9	3	" "	1	2	...	1	1	...	...	1	1	2	...	...
Females	...	...	1	...	1	1	1	1	...	1	...	...	...	6	1	" "	1	1	...	...	1	...	1	...	2	...	...	...

Males	---	---	1	---	---	---	---	---	1	---	---	---	---	2	---	Bright's Disease	1	---	---	---	---	---	---	---	---	1	---	---
Totals	1	3	---	1	2	---	2	---	2	2	5	2	---	20	11	Bronchitis	6	1	1	---	2	2	3	1	3	1	---	---
Males	---	---	---	1	2	---	1	---	1	---	2	2	---	9	5	"	3	1	---	---	1	---	1	1	1	1	---	---
Females	1	3	---	---	---	---	1	---	1	2	3	---	---	11	6	"	3	---	1	---	1	2	2	---	2	---	---	---
Totals	6	3	7	9	1	3	2	3	5	8	6	9	---	62	68	Burns and Scalds	36	12	1	6	3	3	---	1	---	---	---	---
Males	2	3	5	1	---	2	1	---	3	2	2	3	---	24	22	" "	17	2	1	---	1	2	---	1	---	---	---	---
Females	4	---	2	8	1	1	1	3	2	6	4	6	---	38	46	" "	19	10	---	6	2	1	---	---	---	---	---	---
Totals	1	5	11	6	13	14	15	15	8	13	14	5	---	120	113	Cancer *b*	4	1	2	1	1	13	19	37	28	12	2	---
Males	1	2	6	3	4	5	4	6	3	4	8	1	---	47	47	"	3	---	1	---	---	4	7	15	11	4	2	---
Females	---	3	5	3	9	9	11	9	5	9	6	4	---	73	66	"	1	1	1	1	1	9	12	22	17	8	---	---
Males	---	---	---	---	---	---	---	---	---	---	---	1	---	1	1	Carbuncle	1	---	---	---	---	---	---	---	---	---	---	---
Totals	13	12	7	8	12	17	15	20	15	19	22	17	---	177	176	Casualty *c*	15	8	15	11	42	20	18	25	8	5	---	10
Males	12	12	6	8	10	14	10	18	13	17	20	12	---	152	149	"	9	4	13	10	39	17	18	24	8	2	---	8
Females	1	---	1	---	2	3	5	2	2	2	2	5	---	25	27	"	6	4	2	1	3	3	---	1	---	3	---	2
Males	---	---	---	---	---	---	---	---	---	---	1	---	---	1	4	Catarrh	---	---	---	---	---	---	---	---	---	1	---	---
Females	---	---	---	---	---	---	---	---	---	---	---	---	---	------	2	"	---	---	---	---	---	---	---	---	---	---	---	---
Totals	7	15	11	17	15	14	29	39	38	22	13	13	---	283	226	Cephalitis	145	81	13	9	8	9	1	7	3	4	---	3
Males	1	8	6	3	8	10	15	23	13	11	6	4	---	108	122	"	66	15	5	4	4	4	---	3	2	4	---	1
Females	6	7	5	14	7	4	14	16	25	11	7	9	---	125	104	"	79	16	3	5	4	5	1	4	1	---	---	2
Males	---	---	---	---	---	---	---	---	---	---	---	---	---	------	1	Chicken-pox	---	---	---	---	---	---	---	---	---	---	---	---

a 1 Stoppage of Bowels; 1 Stoppage between Stomach and Bowels; 1 Strangulation of Bowels. *b* 1 Fe., Cancerous Lupus. *c* 1 Fe., Bee sting; 1 Male, Choked with Meat.

TABLE XVII.—CONTINUED.

SEX.	MONTHS, 1870.													YEARS.		CAUSES OF DEATH.	AGES.											
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	1870.	1869.		Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Unknown.
Females	...	1	...	...	...	...	...	...	...	...	...	...	...	1	2	Chicken-pox	1	...	...	...	...	...	...	...	...	...	...	...
Females	10	6	17	7	13	7	9	15	11	8	10	15	1	129	118	Childbirth	...	...	...	8	53	52	11	...	...	...	...	5
Totals	1	4	...	4	2	17	56	52	31	10	1	3	...	181	108	Cholera Infantum	181	...	...	...	...	...	...	...	...	...	...	...
Males	...	4	...	3	1	10	28	29	15	6	...	2	...	98	60	" "	98	...	...	...	...	...	...	...	...	...	...	...
Females	1	...	...	1	1	7	28	23	16	4	1	1	...	83	48	" "	83	...	...	...	...	...	...	...	...	...	...	...
Totals	...	...	...	...	...	2	11	11	4	1	1	..	...	30	21	Cholera Morbus	3	5	2	1	3	2	2	2	5	3	2	...
Males	...	...	...	...	...	...	7	8	2	1	1	...	...	19	16	" "	2	5	...	1	2	...	1	2	3	3	...	...
Females	...	...	...	...	...	2	4	3	2	...	...	...	...	11	5	" "	1	...	2	...	1	2	1	...	2	...	2	...
Totals	...	...	...	...	...	1	3	2	...	...	1	1	...	8	9	Cholera	3	...	...	...	...	...	2	...	1	1	...	1
Males	...	...	...	...	...	1	1	1	...	...	...	1	...	4	8	"	3	...	...	...	...	...	1	...	...	...	...	...
Females	...	...	...	...	...	...	2	1	...	...	1	...	...	4	1	"	...	...	...	...	...	...	1	...	1	1	...	1
Females	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	Chloroform *a*	...	...	1	...	...	...	...	...	...	...	...	...
Females	...	...	...	1	...	...	...	...	...	...	...	..	...	1	...	Chorea	...	...	...	...	...	...	...	...	...	1	...	...
Totals	...	...	1	...	...	...	2	3	3	...	...	1	...	10	4	Colic, Bilious	1	...	...	...	2	1	1	2	1	1	1	...

Males	---	---	---	---	---	---	---	1	3	---	---	---	---	4	3	Colic, Bilious	1	---	---	---	1	---	---	1	1	---	---	---
Females	---	---	1	---	---	---	2	2	---	---	---	1	---	6	1	" "	---	---	---	---	1	1	1	1	---	1	1	---
Males	---	---	---	---	---	---	---	1	1	---	---	---	---	2	---	Colic, Painters'	---	---	---	---	---	---	---	1	---	---	---	1
Totals	1	---	---	---	---	2	1	1	---	---	1	---	---	6	7	Colic	2	---	---	---	1	---	---	---	2	1	---	---
Males	1	---	---	---	---	1	1	---	---	---	1	---	---	4	2	"	2	---	---	---	---	---	---	---	1	1	---	---
Females	---	---	---	---	---	1	---	1	---	---	---	---	---	2	5	"	---	---	---	---	1	---	---	---	1	---	---	---
Totals	2	2	5	7	4	5	6	18	15	16	6	2	---	88	78	Congestive Chills	34	6	7	2	9	9	3	4	6	5	2	1
Males	---	1	2	2	2	3	3	6	8	7	3	---	---	37	35	" "	18	2	2	---	5	1	3	2	3	---	1	---
Females	2	1	3	5	2	2	3	12	7	9	3	2	---	51	43	" "	16	4	5	2	4	8	---	2	3	5	1	1
Totals	---	---	---	---	---	1	---	---	---	1	2	---	---	4	1	Constipation	---	1	---	---	1	---	---	---	2	---	---	---
Males	---	---	---	---	---	---	---	---	---	1	2	---	---	3	---	"	---	1	---	---	---	---	---	---	2	---	---	---
Females	---	---	---	---	---	1	---	---	---	---	---	---	---	1	1	"	---	---	---	---	1	---	---	---	---	---	---	---
Totals	81	74	118	110	112	118	114	142	175	127	137	139	4	1451	1233	Consumption	134	21	28	132	351	251	156	135	124	67	22	29
Males	40	29	62	49	60	56	56	69	93	60	60	61	2	697	563	"	78	9	8	40	149	112	85	76	75	38	13	13
Females	41	45	56	61	52	62	58	73	82	67	77	78	1	753	669	"	56	12	20	92	202	138	71	59	49	29	9	16
Unkno'n	---	---	---	---	---	---	---	---	---	---	---	---	1	1	1	"	---	---	---	---	---	1	---	---	---	---	---	---
Females	---	---	1	---	2	---	1	2	---	---	1	1	---	8	2	Convulsions, Puerperal	---	---	---	1	3	2	1	---	---	---	---	1
Totals	5	5	10	10	12	8	15	13	11	11	7	10	---	117	105	Convulsions *b*	105	1	2	2	3	1	2	1	---	---	---	---
Males	5	3	5	7	4	4	10	8	8	7	5	4	---	70	58	"	65	---	---	1	1	1	1	1	---	--	---	---
Females	---	2	5	3	7	4	5	5	3	4	2	6	---	46	47	"	39	1	2	1	2	---	1	---	---	---	---	---
Unkno'n	---	---	---	---	1	---	---	---	---	---	---	---	---	1	---	"	1	---	---	---	---	---	---	---	---	---	---	---

a Given for amputation. *b* Kind not specified.

TABLE XVII.—CONTINUED.

SEX.	MONTHS, 1870.													YEARS.		CAUSES OF DEATH.	AGES.											
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	1870.	1869.		Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Unknown.
Totals	...	1	1	...	...	...	...	...	...	...	1	...	...	3	...	Croup, Membranous	3	...	...	...	...	...	...	...	...	...	...	...
Males	...	1	1	...	...	...	...	...	...	...	...	...	...	2	...	" "	2	...	...	...	...	...	...	...	...	...	...	...
Females	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	" "	1	...	...	...	...	...	...	...	...	...	...	...
Males	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	Croup, Spasmodic	1	...	...	...	...	...	...	...	...	...	...	...
Totals	9	7	7	5	3	4	4	8	13	22	18	23	...	123	105	Croup	108	14	...	...	...	...	...	...	...	1	...	...
Males	4	3	4	2	1	2	2	3	7	14	13	15	...	70	52	"	65	4	...	...	...	...	...	...	...	1	...	...
Females	5	4	3	3	2	2	2	5	6	8	5	8	...	53	51	"	43	10	...	...	...	...	...	...	...	...	...	...
Unkno'n	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	"	...	...	...	...	...	...	...	...	...	...	...	...
Totals	...	...	...	...	...	1	...	...	...	...	...	1	...	2	2	Cyanosis	2	...	...	...	...	...	...	...	...	...	...	...
Males	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	"	1	...	...	...	...	...	...	...	...	...	...	...
Females	...	...	...	...	...	1	...	...	...	...	...	...	...	1	2	"	1	...	...	...	...	...	...	...	...	...	...	...
Males	1	...	...	1	...	...	...	...	2	1	1	1	...	7	4	Cystitis	...	...	...	...	...	...	...	...	4	3	...	...
Females	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	"	...	...	...	...	...	...	...	...	...	...	...	...
Totals	3	6	8	8	4	16	8	17	15	11	6	9	...	111	102	Debility	60	1	...	3	4	2	5	6	11	10	6	3

Males....	1	5	4	3	2	7	4	8	6	7	3	3	...	58	49	Debility	81	1	...	1	2	...	1	2	3	6	4	2
Females.	2	1	4	5	2	9	4	9	9	4	3	6	...	58	52	"	29	...	...	2	2	2	4	4	8	4	2	1
Unkno'n.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	"	...	...	...	...	...	...	...	...	...	...	...	...
Totals...	1	1	...	1	2	2	1	...	...	...	...	...	...	8	...	Debility, Nervous	...	...	...	...	2	2	1	2	1	...	...	...
Males....	...	...	...	...	1	1	...	...	...	...	...	...	...	2	...	" "	...	...	...	...	...	...	...	1	1	...	...	...
Females.	1	1	...	1	1	1	1	...	...	...	...	...	...	6	...	" "	...	...	...	...	2	2	1	1	...	...	...	...
Males....	...	1	...	...	1	...	...	2	...	...	...	...	...	4	2	Delirium Tremens	...	...	...	...	...	...	2	1	1	...	...	...
Totals...	2	6	3	6	6	23	88	114	68	44	11	6	1	378	295	Diarrhœa	332	9	...	...	4	6	3	3	4	6	4	7
Males....	...	3	1	4	5	10	42	58	39	20	5	3	1	191	163	"	166	4	...	...	1	4	1	3	1	6	3	2
Females.	2	3	2	2	1	13	46	56	29	24	6	3	...	187	132	"	166	5	...	...	3	2	2	...	3	...	1	5
Totals...	...	2	...	1	1	...	...	9	7	4	3	2	...	29	16	Diarrhœa, Chronic	10	1	1	...	3	3	1	4	1	4	1	...
Males....	...	1	...	1	...	...	...	2	4	4	3	1	...	16	11	" "	5	1	...	...	2	2	...	4	...	1	1	...
Females.	...	1	...	...	1	...	...	7	3	...	...	1	...	13	5	" "	5	...	1	...	1	1	1	...	1	3	...	...
Totals...	2	2	6	2	2	2	1	2	3	1	2	4	...	29	25	Diabetes	3	...	2	2	1	5	2	4	3	7	...	...
Males....	1	...	3	2	2	...	1	2	3	...	1	4	...	19	19	"	2	...	...	...	...	3	1	3	3	7	...	...
Females.	1	2	3	...	...	2	...	...	...	1	1	...	...	10	6	"	1	...	2	2	1	2	1	1	...	...	...	...
Totals...	12	8	12	1	7	6	6	9	9	21	12	18	...	121	89	Diphtheria	70	31	12	4	1	...	...	...	1	1	...	1
Males....	6	5	5	...	4	2	2	6	5	8	6	7	...	56	49	"	33	15	4	3	...	...	...	...	1	...	...	...
Females.	6	3	7	1	3	4	4	3	4	13	6	11	...	65	40	"	37	16	8	1	1	...	...	...	...	1	...	1
Totals...	...	...	1	1	...	...	...	...	1	2	1	1	...	7	...	Dropsy of Abdomen	...	...	...	...	...	2	...	1	2	2	...	...
Males....	...	...	...	...	...	...	...	...	1	1	1	1	...	4	...	" "	...	...	...	...	...	...	...	1	1	2	...	...
Females.	...	...	1	1	...	...	...	...	...	1	...	...	...	3	...	" "	...	...	...	...	...	2	...	...	1	...	...	...

TABLE XVII.—CONTINUED.

SEX.	MONTHS, 1870.													YEARS.		CAUSES OF DEATH.	AGES.											
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	1870.	1869.		Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Unknown.
Totals...	1	...	2	3	1	3	...	2	1	1	2	...	...	16	5	Dropsy of Chest	...	2	...	...	1	2	1	4	4	2	...	...
Males...	...	...	1	1	...	1	...	...	...	...	1	...	...	4	1	" "	...	1	...	...	...	...	...	1	1	1	...	...
Females.	1	...	1	2	1	2	...	2	1	1	1	...	...	12	4	" "	...	1	...	...	1	2	1	3	3	1	...	...
Totals...	1	3	7	7	2	6	10	7	4	8	2	5	...	62	...	Dropsy of Head	49	10	1	...	...	...	...	1	1	...	...	...
Males...	...	2	6	4	1	1	5	7	3	5	...	3	...	37	...	" "	28	6	1	...	...	...	...	1	1	...	...	...
Females.	1	1	1	3	1	5	5	...	1	3	2	2	...	25	...	" "	21	4	...	...	...	...	...	...	...	...	...	...
Totals...	1	2	4	...	4	3	4	2	4	8	8	3	...	43	22	Dropsy of Heart	4	2	3	2	5	6	4	4	8	4	1	...
Males...	1	...	1	...	2	...	2	1	1	4	4	1	...	17	10	" "	3	2	1	...	...	1	1	1	7	...	1	...
Females.	...	2	3	...	2	3	2	1	3	4	4	2	...	26	12	" "	1	...	2	2	5	5	3	3	1	4	...	...
Females.	...	...	...	...	...	...	1	...	...	...	...	1	...	2	...	Dropsy, Ovarian	...	...	...	...	1	...	...	...	1	...	...	...
Females.	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	Dropsy of Uterus	...	...	...	...	1	...	...	...	...	...	...	...
Totals...	17	7	21	11	20	18	25	25	28	26	17	31	...	246	246	Dropsy, Unspecified	25	9	10	5	15	22	25	41	46	39	8	1
Males...	8	3	10	6	5	7	14	7	11	13	7	12	...	103	110	" "	17	6	4	3	3	8	6	20	17	15	4	...
Females.	9	4	11	5	15	11	11	18	17	13	10	19	...	143	136	" "	8	3	6	2	12	14	19	21	29	24	4	1

Totals...	6	8	7	12	11	17	28	8	5	6	4	4	1	107	96	Drowning	18	16	14	14	20	12	4	3	2	1	...	3
Males....	6	2	5	8	10	17	19	7	4	5	3	4	1	91	76	"	12	14	14	10	17	12	4	2	2	1	...	3
Females.	...	1	2	4	1	...	4	1	1	1	1	...	...	16	20	"	6	2	...	4	3	...	...	1	...	...	...	...
Totals...	...	...	...	2	4	9	57	131	114	31	17	8	...	373	286	Dysentery	286	17	8	2	7	6	7	8	16	12	1	3
Males....	...	...	...	...	2	7	31	72	48	21	11	5	...	197	136	"	151	10	5	...	6	2	2	5	9	5	1	1
Females.	...	...	...	2	2	2	26	59	66	10	6	3	...	176	99	"	135	7	3	2	1	4	5	3	7	7	...	2
Unkno'n.	...	...	...	...	...	...	...	...	...	...	...	...	...	.....	1	"	...	...	...	...	...	...	...	...	...	...	...	...
Males....	...	1	...	...	...	...	...	...	...	...	...	...	...	1	....	Dysentery, Chronic	1	...	...	...	...	...	...	...	...	...	...	...
Totals...	1	2	3	...	1	1	1	3	2	4	4	2	1	25	7	Dyspepsia	4	...	...	...	1	3	5	5	5	2	...	...
Males....	1	1	2	...	1	1	1	...	1	4	2	1	...	15	4	"	2	...	...	...	1	...	2	4	4	2	...	...
Females.	...	1	1	...	...	...	...	3	1	...	2	1	1	10	3	"	2	...	...	...	...	3	3	1	1	...	...	...
Totals...	2	11	4	13	11	16	27	26	25	29	10	13	...	187	119	Enteritis (Inflam. Bowels)	96	14	15	7	11	12	10	8	9	4	1	...
Males....	1	8	1	7	6	8	18	11	13	11	5	8	...	97	64	" " "	53	9	9	1	5	1	7	5	3	4	...	...
Females.	1	3	3	6	5	8	9	15	12	18	5	5	...	90	55	" " "	43	5	6	6	6	11	3	3	6	...	1	...
Totals...	...	...	1	2	1	2	3	1	...	1	3	4	...	18	12	Epilepsy	5	...	...	2	3	4	2	...	1	...	...	1
Males....	...	...	...	1	1	...	1	...	...	...	3	3	...	9	7	"	2	...	...	2	...	2	1	...	1	...	...	1
Females.	...	...	1	1	...	2	2	1	...	1	...	1	...	9	5	"	3	...	...	...	3	2	1	...	...	...	...	...
Totals...	4	4	5	5	3	2	13	5	9	5	6	7	...	68	69	Erysipelas	23	5	...	4	6	3	7	9	7	3	1	...
Males....	2	4	2	2	1	1	10	3	4	3	1	3	...	36	40	"	12	2	...	2	2	2	4	8	1	3	...	...
Females.	2	...	3	3	2	1	3	2	5	2	5	4	...	32	29	"	11	3	2	...	4	1	3	1	6	...	1	...
Females.	...	...	...	...	...	...	...	1	...	...	...	...	...	1	....	Felon *a*	...	...	...	...	...	...	...	...	...	1	...	...

a Felon on two fingers.

TABLE XVII.—CONTINUED.

SEX.	MONTHS, 1870.													YEARS.		CAUSES OF DEATH.	AGES.											
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	1870.	1869.		Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Unknown.
Totals	1	1	3	2	1	2	3	7	15	18	8	4	...	65	41	Fever, Bilious	16	3	5	5	7	2	3	5	10	8	...	1
Males	...	1	2	1	1	1	2	2	9	7	5	3	...	34	18	" "	8	2	4	3	2	1	2	3	5	3	...	1
Females	1	...	1	1	...	1	1	5	6	10	3	1	...	30	23	" "	8	1	1	2	5	1	1	2	4	5	...	...
Unkno'n	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	" "	...	...	...	...	...	...	...	...	1	...	...	...
Totals	...	...	1	...	1	...	1	...	1	3	1	...	...	8	...	Fever, Congestive	4	1	...	...	...	...	1	1	1	...	...	...
Males	...	...	1	...	...	...	...	...	1	1	1	...	...	4	...	" "	3	...	...	...	...	...	...	...	1	...	...	...
Females	...	...	...	...	1	...	1	...	...	2	...	...	...	4	...	" "	1	1	...	...	...	...	1	1	...	...	...	...
Males	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	Fever, Continued	...	...	...	...	...	...	...	1	...	...	...	...
Totals	1	...	...	1	2	3	4	13	14	12	5	4	...	59	38	Fever, Intermittent	30	4	1	3	5	1	2	1	3	6	3	...
Males	1	...	...	1	2	2	3	7	6	6	2	3	...	33	20	" "	18	3	...	1	2	...	1	...	1	5	2	...
Females	...	...	...	...	...	1	1	6	8	6	3	1	...	26	18	" "	12	1	1	2	3	1	1	1	2	1	1	...
Females	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	Fever, Malignant	...	...	...	1	...	...	...	...	...	...	...	...
Totals	...	...	...	1	1	...	1	1	2	2	1	...	...	9	5	Fever, Remittent	4	1	...	...	...	2	1	1	...	...	...	...
Males	...	...	...	...	1	...	...	...	1	2	...	...	...	4	3	" "	2	...	...	...	...	1	...	1	...	...	...	...

Females..	...	...	...	1	...	...	1	1	1	...	1	...	...	5	2	Fever, Remittent	2	1	...	...	...	1	1	...	...	...	...	...
Totals ...	...	2	...	1	...	...	...	...	1	1	...	3	...	8	5	Fever, Spotted	1	2	1	2	...	1	...	...	...	1	...	...
Males	...	2	...	...	...	...	...	...	...	1	...	1	...	4	3	" "	...	...	...	2	...	1	...	...	...	1	...	...
Females..	...	...	...	1	...	...	...	...	1	...	...	2	...	4	2	" "	1	2	1	...	...	...	...	...	...	...	...	...
Totals ...	10	17	33	12	17	17	34	64	106	117	94	52	1	574	437	Fever, Typhoid	57	49	53	82	119	54	48	49	37	20	1	5
Males	7	11	9	6	7	6	18	32	50	59	38	27	...	270	228	" "	28	16	17	33	53	29	27	33	22	10	...	2
Females..	3	6	24	6	10	11	16	32	56	58	56	25	1	304	209	" "	29	33	36	49	66	25	21	16	15	10	1	3
Males	...	...	...	...	...	...	...	...	...	...	...	...	...	.....	6	Fever, Typhus	...	...	...	...	...	...	...	...	...	...	...	...
Females..	1	...	...	...	...	...	...	...	...	...	...	...	...	1	3	" "	...	...	...	...	1	...	...	...	...	...	...	...
Totals ...	3	5	6	9	1	4	14	18	20	21	13	12	...	126	248	Fever, unknown kind	60	8	4	10	15	10	7	2	3	7	...	...
Males	2	3	6	6	...	2	6	12	11	13	6	4	...	71	133	" " "	37	4	1	6	8	1	6	1	2	5	...	...
Females..	1	2	...	3	1	2	8	6	9	8	7	8	...	55	115	" " "	23	4	3	4	7	9	1	1	1	2	...	...
Totals ...	...	...	...	...	2	...	2	1	1	...	1	...	...	7	....	Fits, Worm	5	1	...	...	1	...	...	...	...	...	...	...
Males	...	...	...	...	1	...	1	...	...	...	...	...	...	2	....	" "	2	...	...	...	...	...	...	...	...	...	...	...
Females..	...	...	...	...	1	...	1	1	1	...	1	...	...	5	....	" "	3	1	...	...	1	...	...	...	...	...	...	...
Totals....	7	8	13	10	15	15	20	24	22	7	16	7	...	164	151	Fits, unknown kind	130	6	6	4	7	3	1	1	1	3	...	2
Males	4	5	10	5	10	9	14	11	12	3	9	5	...	97	81	" " "	84	1	3	1	2	1	1	1	...	2	...	1
Females..	3	3	3	5	5	6	6	13	10	4	7	2	...	67	69	" " "	46	5	3	2	5	2	...	...	1	1	...	1
Unkno'n.	...	...	...	...	...	...	...	...	...	...	...	...	...	.....	1	" " "	...	...	...	...	...	...	...	...	...	...	...	...
Males	...	...	...	...	...	...	...	1	...	...	...	...	...	1	....	Fracture of Arm	...	...	...	...	...	...	...	...	1	...	...	...
Males	...	1	...	...	...	...	...	...	...	...	...	...	...	1	....	Fracture of Clavicle	...	...	1	...	...	...	...	...	...	...	...	...
Females..	...	...	...	...	...	...	...	...	...	...	1	...	...	1	....	Fracture of Hip	...	...	...	...	...	...	...	...	...	...	1	...

TABLE XVII.—CONTINUED.

SEX.	MONTHS, 1870.													YEARS.		CAUSES OF DEATH.	AGES.											
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	1870.	1869.		Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Unknown.
Males	...	1	...	...	...	1	...	...	...	...	...	1	...	3	...	Fracture of Leg *a*	...	...	...	...	...	...	1	...	2	...	...	...
Females	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	" "	...	...	...	...	...	...	...	...	...	...	...	...
Males	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	Fracture of Neck	...	...	...	...	1	...	...	...	...	...	...	...
Males	...	...	...	...	...	...	...	...	...	...	1	1	...	2	4	Fracture of Skull *b*	...	...	...	1	...	1	...	...	...	...	...	...
Females	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	" "	...	...	...	...	...	...	...	...	...	...	...	...
Males	...	...	...	...	...	...	1	...	...	...	...	...	...	1	1	Fracture	1	...	...	...	...	...	...	...	...	...	...	...
Males	...	...	...	...	...	*c* 1	...	...	...	...	...	*d* 1	...	2	...	Freezing *c d*	...	1	...	...	1	...	...	...	...	...	...	...
Females	...	...	...	...	...	...	...	...	...	1	...	1	...	2	...	Gall Stones	...	...	...	...	...	1	...	1	...	...	...	...
Males	...	...	...	1	...	...	1	...	...	1	...	...	...	3	...	Gangrene	1	...	...	...	...	...	...	...	1	...	1	...
Totals	1	1	1	...	2	2	2	3	5	3	1	2	...	23	15	Gastritis	5	...	2	1	4	2	...	3	4	1	1	...
Males	1	...	...	...	...	1	2	2	4	1	...	...	...	11	5	"	3	...	...	...	1	...	...	2	3	1	1	...
Females	...	1	1	...	2	1	...	1	1	2	1	2	...	12	10	"	2	...	2	1	3	2	...	1	1	...	...	...
Males	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	Gout	...	...	...	...	...	...	...	...	...	...	1	...
Totals	1	2	1	1	2	1	3	4	3	1	2	3	...	24	24	Gravel	1	...	...	...	1	...	...	4	3	12	1	2

Males	1	2	1	1	2	1	3	4	3	...	2	3	...	23	22	Gravel
Females	...	...	...	...	...	...	...	...	...	1	...	...	...	1	2	"
Totals	...	...	...	2	4	1	2	2	3	3	3	1	...	21	14	Gun-shot
Males	...	...	...	2	4	1	2	2	3	3	3	...	...	20	12	"
Females	...	...	...	...	...	...	...	...	...	...	...	1	...	1	2	"
Totals	1	...	...	2	...	1	...	2	...	2	1	3	...	12	8	Hæmoptysis
Males	1	...	...	2	...	...	...	2	...	1	1	2	...	9	7	"
Females	...	...	...	...	...	1	...	...	...	1	...	1	...	3	1	"
Males	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	Headache
Totals	...	...	...	...	...	...	1	...	...	1	...	...	...	2	...	Heart Clot
Males	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	" "
Females	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	" "
Totals	10	18	15	21	27	21	26	23	16	21	32	23	...	258	252	Heart Disease (Unknown)
Males	6	9	4	17	13	10	14	14	10	12	20	16	...	145	140	" " "
Females	4	9	11	4	14	11	12	9	6	9	12	12	...	113	112	" " "
Totals	...	...	1	1	...	...	...	...	...	...	...	...	...	2	...	Heart, Enlargement of
Males	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	" "
Females	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	" "
Males	...	1	1	...	...	...	...	...	...	...	...	...	...	2	...	Heart, Ossification of
Totals	...	...	...	1	...	...	...	...	...	1	...	1	...	3	...	Heart, Palpitation of
Males	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	" "

Males	1	...	...	...	1	...	...	3	3	12	1	2
Females	...	...	...	...	...	...	...	1	...	...	...	...
Totals	1	...	2	5	5	3	2	1	...	...	...	2
Males	1	...	2	5	5	2	2	1	...	...	...	2
Females	...	...	...	...	...	1	...	...	...	...	...	...
Totals	...	...	...	2	4	2	1	...	2	1	...	...
Males	...	...	...	1	4	1	...	...	2	1	...	...
Females	...	...	...	1	...	1	1	...	...	...	...	...
Totals	...	...	...	...	1	...	...	...	...	...	...	...
Males	...	...	...	...	...	...	...	...	...	1	...	...
Females	...	...	...	...	1	...	...	...	...	...	...	...
Totals	28	4	4	5	18	22	40	41	47	42	9	3
Males	18	1	3	2	11	7	22	25	27	27	5	2
Females	10	3	1	3	7	15	18	16	20	15	4	1
Totals	...	...	...	...	...	...	...	...	...	...	...	...
Males	...	...	...	...	...	...	...	...	1	...	...	...
Females	1	...	...	...	...	...	...	...	...	...	...	...
Males	...	...	...	...	...	...	1	...	...	1	...	...
Totals	...	...	...	...	...	...	...	...	...	...	...	...
Males	...	...	...	...	...	...	...	...	...	1	...	...

a Compound Fracture of Leg.
b 1 Fracture of Skull (Drunk).

c Probably intended to be written Jan. by the Supervisor, but returned by County Clerk as June.
d Drunk.

TABLE XVII.—CONTINUED.

SEX.	MONTHS, 1870.													YEARS.		CAUSES OF DEATH.	AGES.											
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	1870.	1869.		Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Unknown.
Females	...	...	...	...	...	...	...	...	...	1	...	1	...	2	...	Heart, Palpitation of	...	...	...	1	...	...	...	...	1	...	...	...
Males	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	Heart, Valvular Dis. of	...	...	...	...	...	...	...	...	1	...	...	...
Males	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	Hemorrhage from Bladder	...	...	...	...	...	...	...	...	1	...	...	...
Totals	...	...	...	...	...	...	...	...	1	1		1	...	3	...	Hemorrhage from Bowels	...	...	...	...	...	...	...	...	...	...	...	...
Males	...	...	...	...	...	...	...	...	1	1	...	...	...	2	...	" " "	1	...	...	...	...	1	...	...	...	...	...	...
Females	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	" " "	...	...	...	...	...	...	...	1	...	...	...	...
Males	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	Hemorrhage from Leg *a*	...	...	...	...	1	...	...	...	...	...	...	...
Females	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	Hem. from Umbilicus	1	...	...	...	...	...	...	...	...	...	...	...
Females	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	Hemorrhage from Nose	...	...	...	1	...	...	...	...	...	...	...	...
Females	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	Hemorrhage, Puerperal	...	...	...	...	1	...	...	...	...	...	...	...
Females	...	...	...	...	...	...	...	1	...	...	...	...	...	1	1	Hemorrhage from Uterus	...	...	...	...	...	...	1	...	...	...	...	...
Totals	...	...	1	...	...	...	1	...	...	2	4	3	...	11	15	Hemorrhage *b*	2	...	...	1	1	1	...	2	...	2	...	2
Males	...	...	...	...	...	...	...	...	...	2	1	3	...	6	9	"	1	...	...	1	1	...	...	1	...	1	...	1
Females	...	...	1	...	...	...	1	...	...	...	3	...	...	5	6	"	1	...	...	...	...	1	...	1	...	1	...	1

Totals	---	1	---	---	1	1	---	1	---	1	---	1	---	6	5	Hepatitis	1	1	---	---	---	1	2	---	1	---	---	---
Males	---	---	---	---	---	---	---	1	---	---	---	---	---	1	2	"	---	1	---	---	---	---	---	---	---	---	---	---
Females	---	1	---	---	1	1	---	---	---	1	---	1	---	5	3	"	1	---	---	---	---	1	2	---	1	---	---	---
Females	---	---	---	---	---	---	---	---	1	---	---	1	---	1	---	Hepatitis, Chronic	---	---	---	---	---	---	---	1	---	---	---	---
Males	---	---	---	---	---	---	---	---	---	---	---	1	---	1	---	Hernia of Brain	1	---	---	---	---	---	---	---	---	---	---	---
Females	1	--	---	---	---	---	---	---	---	---	---	---	---	1	---	Hernia, Umbilical	---	---	---	---	---	---	---	---	1	---	---	---
Totals	---	2	2	1	---	1	---	3	1	4	1	---	---	15	18	Hernia, Unspecified	1	---	---	---	---	2	2	1	5	3	1	---
Males	---	1	2	1	---	1	---	2	1	3	1	---	---	12	11	" "	1	---	---	---	---	1	1	1	4	3	1	---
Females	---	1	---	---	---	---	---	1	---	1	---	---	---	3	7	" "	---	---	---	---	---	1	1	---	1	---	---	---
Totals	---	1	---	2	---	---	---	---	---	---	2	---	---	5	2	Hip Disease	---	3	1	---	---	1	---	---	---	---	---	---
Males	---	1	---	1	---	---	---	---	---	---	1	---	---	3	2	" "	---	2	1	---	---	---	---	---	---	---	---	---
Females	---	---	---	1	---	---	---	---	---	---	1	---	---	2	---	" "	---	1	---	---	---	1	---	---	---	---	---	---
Males	---	---	---	---	---	---	---	---	1	---	---	---	---	1	---	Homicide	---	---	1	---	---	---	---	---	---	---	---	---
Totals	---	---	---	---	1	1	---	---	---	---	---	1	---	3	8	Hydrocephalus	---	---	---	---	---	---	---	---	---	---	---	---
Males	---	---	---	---	---	---	---	---	---	---	---	1	---	1	3	"	1	---	---	---	---	---	---	---	---	---	---	---
Females	---	---	---	---	1	1	---	---	---	---	---	---	---	2	5	"	2	---	---	---	---	---	---	---	---	---	---	---
Totals	2	---	---	4	3	4	4	6	7	2	2	3	---	37	49	Infantile *c*	37	---	---	---	---	---	---	---	---	---	---	---
Males	---	---	---	2	3	1	1	4	3	2	2	2	---	20	32	"	20	---	---	---	---	---	---	---	---	---	---	---
Females	2	---	---	2	---	3	3	2	4	---	---	1	---	17	14	"	17	---	---	---	---	---	---	---	---	---	---	---
Unkno'n	---	---	---	---	---	---	---	---	---	---	---	---	---		3	"	---	---	---	---	---	---	---	---	---	---	---	---
Totals	---	---	1	---	1	2	2	2	1	2	1	1	---	13	19	Insanity	---	---	---	---	4	1	3	1	---	4	---	---

a 1 Hemorrhage of leg after amputation. *b* 1 Secondary hemorrhage after amputation, in 1870. *c* 1 From cow's milk.

TABLE XVII.—CONTINUED.

SEX.	MONTHS, 1870.													YEARS.		CAUSES OF DEATH.	AGES.											
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	1870.	1869.		Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Unknown.
Males	...	...	1	...	1	...	1	1	1	...	...	...	...	5	15	Insanity	...	...	...	...	1	...	1	...	...	8	...	...
Females	...	...	...	...	...	2	1	1	...	2	1	1	...	8	4	"	...	...	...	...	3	1	2	1	...	1	...	...
Totals	1	...	...	1	1	...	...	1	1	2	2	1	...	10	10	Intemperance	...	...	...	...	...	2	3	3	1	...	...	1
Males	1	...	...	1	1	...	...	1	1	1	2	1	...	9	8	"	...	...	...	...	...	1	3	3	1	...	...	1
Females	...	...	...	...	...	...	...	...	...	1	...	...	...	1	2	"	...	...	...	...	...	1	...	...	...	...	...	...
Males	...	...	...	1	...	...	...	...	...	...	...	...	...	1	1	Intussusception	...	1	...	...	...	...	...	...	...	...	...	...
Females	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	"	...	...	...	...	...	...	...	...	...	...	...	...
Totals	1	2	...	1	2	...	1	5	...	1	2	5	...	20	11	Jaundice	8	2	...	...	...	...	...	3	5	1	...	1
Males	1	2	...	1	1	...	1	3	...	1	1	2	...	13	8	"	6	...	...	...	...	...	...	1	4	1	...	1
Females	...	...	...	...	1	...	...	2	...	...	1	3	...	7	3	"	2	2	...	...	...	...	...	2	1	...	...	...
Males	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	Jaw, Disease of Lower	...	...	...	...	...	...	1	...	...	...	...	...
Totals	...	4	5	...	1	4	3	3	2	3	4	4	...	33	29	Kidney Disease	2	...	...	1	5	1	5	2	7	8	2	...
Males	...	4	4	...	1	2	1	2	1	3	3	4	...	25	22	" "	2	...	...	1	2	...	2	2	6	8	2	...
Females	...	...	1	...	...	2	2	1	1	...	1	...	...	8	7	" "	...	...	...	...	3	1	3	...	1	...	...	...

Totals	---	---	---	---	---	---	7	---	---	---	---	---	---	7	4	Lightning	1	---	2	2	---	---	1	1	---	---	---	---
Males	---	---	---	---	---	---	6	---	---	---	---	---	---	6	3	"	---	---	2	2	---	---	1	1	---	---	---	---
Females	---	---	---	---	---	---	1	---	---	---	---	---	---	1	1	"	1	---	---	---	---	---	---	---	---	---	---	---
Totals	---	1	---	---	---	1	---	1	---	---	---	2	---	5	1	Liver, Enlargement of	2	---	---	1	---	---	1	---	---	1	---	---
Males	---	---	---	---	---	---	---	1	---	---	---	---	---	1	---	" "	1	---	---	---	---	---	---	---	---	---	---	---
Females	---	1	---	---	---	1	---	---	---	---	---	2	---	4	1	" "	1	---	---	1	---	---	1	---	---	1	---	---
Totals	---	---	---	1	---	---	---	---	---	---	1	---	---	2	---	Liver, Tumor of	---	---	---	---	---	1	---	1	---	---	---	---
Males	---	---	---	---	---	---	---	---	---	---	1	---	---	1	---	" "	---	---	---	---	---	1	---	---	---	---	---	---
Females	---	---	---	1	---	---	---	---	---	---	---	---	---	1	---	" "	---	---	---	---	---	---	---	1	---	---	---	---
Totals	2	3	6	---	4	4	4	9	5	14	17	4	---	72	47	Liver Disease	9	---	1	4	3	11	12	11	14	4	---	3
Males	2	1	5	---	---	2	4	2	5	9	9	1	---	40	30	" "	4	---	---	1	2	3	8	8	11	2	---	1
Females	---	2	1	---	4	2	---	7	---	5	8	3	---	32	17	" "	5	---	1	3	1	8	4	3	3	2	---	2
Totals	10	9	16	15	11	12	10	13	17	11	11	19	---	154	112	Lung Disease	59	8	5	8	12	14	17	11	10	7	3	---
Males	5	6	10	7	4	5	5	4	10	8	6	10	---	80	67	" "	25	4	2	4	5	8	10	10	8	1	3	---
Females	5	3	6	8	7	7	5	9	7	3	5	9	---	74	45	" "	34	4	3	4	7	6	7	1	2	6	---	---
Males	---	---	---	---	---	---	1	---	---	---	---	---	---	1	---	Mania, Acute	---	---	---	---	---	1	---	---	---	---	---	---
Totals	1	---	---	1	---	2	1	---	1	---	---	---	---	6	4	Malformation *a*	5	1	---	---	---	---	---	---	---	---	---	---
Males	1	---	---	---	---	1	1	---	---	---	---	---	---	3	1	"	2	1	---	---	---	---	---	---	---	---	---	---
Females	---	---	---	1	---	1	---	---	1	---	---	---	---	3	3	"	3	---	---	---	---	---	---	---	---	---	---	---
Females	---	---	---	---	---	---	---	---	---	---	1	---	---	1	---	Marasmus	1	---	---	---	---	---	---	---	---	---	---	---
Totals	---	4	10	8	10	3	5	7	2	2	2	3	---	56	147	Measles	36	10	---	2	4	2	1	1	---	---	---	---

a 8 Of imperfect heart.

TABLE XVII.—CONTINUED.

SEX.	MONTHS, 1870.													YEARS.		CAUSES OF DEATH.	AGES.											
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	1870.	1869.		Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Unknown.
Males	---	1	6	1	6	2	---	4	---	2	2	2	---	26	84	Measles	19	4	---	---	2	---	1	---	---	---	---	---
Females	---	3	4	7	4	1	5	3	2	---	---	1	---	30	63	"	17	6	---	2	2	2	---	1	---	---	---	---
Males	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	Meningitis	---	---	---	---	---	---	---	---	---	---	---	---
Females	---	---	---	---	---	---	---	1	---	---	---	---	---	1	1	"	1	---	---	---	---	---	---	---	---	---	---	---
Males	1	---	---	---	---	---	---	---	---	---	---	---	---	1	---	Meningitis, Cerebro-Spinal	1	---	---	---	---	---	---	---	---	---	---	---
Males	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2	Meningitis, Spinal	---	---	---	---	---	---	---	---	---	---	---	---
Females	---	--	---	---	---	---	---	---	---	---	---	1	---	1	4	" "	---	---	---	---	1	---	---	---	---	---	---	---
Males	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	Meningitis, Tubercular	---	---	---	---	---	---	---	---	---	---	---	---
Females	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2	" "	---	---	---	---	---	---	---	---	---	---	---	---
Females	2	1	2	3	3	4	1	6	2	5	1	---	---	35	21	Metria (Puer. Fever)	---	---	---	2	17	11	3	---	---	---	---	2
Females	---	---	1	---	1	1	1	1	---	2	---	2	---	9	4	Metritis	---	---	---	1	4	2	2	---	---	---	---	---
Females	---	---	---	---	1	---	---	---	---	1	---	---	---	2	---	Milk Leg	---	---	---	---	---	2	---	---	---	---	---	---
Totals	---	---	---	---	---	---	---	---	---	1	---	1	---	2	7	Mortification	1	---	---	---	1	---	---	---	---	---	---	---
Males	---	---	---	---	---	---	---	---	---	1	---	---	---	1	5	"	1	---	---	---	---	---	---	---	---	---	---	---

Females	---	---	---	---	---	---	---	---	---	---	---	1	---	1	2	Mortification	---	---	---	---	1	---	---	---	---	---	---	---	---
Totals	---	---	---	---	---	---	2	1	1	---	---	---	---	4	6	Murder	---	---	---	---	---	1	2	---	---	1	---	---	---
Males	---	---	---	---	---	---	---	1	---	---	---	---	---	1	5	"	---	---	---	---	---	---	1	---	---	---	---	---	---
Females	---	---	---	---	---	---	2	---	1	---	---	---	---	3	1	"	---	---	---	---	---	1	1	---	---	1	---	---	---
Totals	---	---	---	---	---	2	---	---	1	4	3	---	---	10	3	Nephritis (Inflam. Kidneys)	1	---	---	---	---	1	1	2	1	3	1	---	---
Males	---	---	---	---	---	1	---	---	1	4	3	---	---	9	1	" " "	1	---	---	---	---	1	1	1	1	3	1	---	---
Females	---	---	---	---	---	1	---	---	---	---	---	---	---	1	2	" " "	---	---	---	---	---	---	---	1	---	---	---	---	---
Totals	1	---	---	---	---	---	---	---	---	---	---	1	---	2	---	Nervous Affection	---	---	---	---	---	---	1	---	1	---	---	---	---
Males	---	---	---	---	---	---	---	---	---	---	---	1	---	1	---	" "	---	---	---	---	---	---	---	---	1	---	---	---	---
Females	1	---	---	---	---	---	---	---	---	---	---	---	---	1	---	" "	---	---	---	---	---	---	1	---	---	---	---	---	---
Totals	1	---	1	---	---	1	---	---	---	1	---	3	---	7	7	Neuralgia	---	---	---	---	1	---	2	1	---	3	---	---	---
Males	1	---	---	---	---	---	---	---	---	---	---	---	---	1	4	"	---	---	---	---	---	---	---	---	---	1	---	---	---
Females	---	---	1	---	---	1	---	---	---	1	---	3	---	6	3	"	---	---	---	---	1	---	2	1	---	2	---	---	---
Totals	---	---	1	1	2	4	3	4	5	4	5	7	1	37	47	Noma (Canker)	30	---	1	1	1	2	1	1	---	---	---	---	---
Males	---	---	---	---	---	1	2	2	3	2	3	4	---	17	24	" "	15	---	---	---	---	---	1	1	---	---	---	---	---
Females	---	---	1	1	2	3	1	2	2	2	2	3	1	20	23	" "	15	---	1	1	1	2	---	---	---	---	---	---	---
Totals	---	---	---	1	---	---	---	3	---	---	---	---	---	4	---	Nursing Sore Mouth	2	---	---	---	1	1	---	---	--	---	---	---	---
Males	---	---	---	---	---	---	---	1	---	---	---	---	---	1	---	" " "	1	---	---	---	---	---	---	---	---	---	---	---	---
Females	---	---	---	1	---	---	---	2	---	---	---	---	---	3	---	" " "	1	---	---	---	1	1	---	---	---	---	---	---	---
Totals	9	18	19	17	26	20	25	46	34	39	25	35	---	318	310	Old Age	---	---	---	---	---	---	---	3	18	127	163	2	
Males	6	11	10	6	7	13	13	25	7	13	10	21	---	147	153	" "	---	---	---	---	---	---	---	1	5	61	79	1	
Females	3	7	9	11	19	7	12	21	27	21	15	14	---	166	157	" "	---	---	---	---	---	---	---	2	13	66	84	1	

TABLE XVII.—CONTINUED.

SEX.	MONTHS, 1870.													YEARS.		CAUSES OF DEATH.	AGES.											
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	1870.	1869.		Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Unknown.
Females	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	Operation *a*	...	...	...	...	1	...	...	...	...	...	...	...
Females	...	...	...	...	1	...	...	2	...	...	...	...	...	3	3	Ovarian Tumor	...	...	...	...	1	1	...	...	...	1	...	...
Females	...	...	...	...	...	1	...	...	...	...	1	...	...	2	...	Ovariotomy	...	...	...	...	...	1	1	...	...	...	...	...
Totals	7	6	5	11	7	7	4	13	19	16	12	8	...	115	120	Paralysis	2	...	1	3	2	3	9	15	32	30	13	5
Males	3	4	4	8	4	5	3	5	11	10	4	5	...	66	62	"	1	...	1	...	...	3	5	12	19	17	7	1
Females	4	2	1	3	3	2	1	8	8	6	8	3	...	49	58	"	1	...	...	3	2	...	4	3	13	13	6	4
Totals	...	...	...	1	1	...	1	...	1	...	1	...	...	5	...	Paralysis, General	...	...	...	...	...	1	1	1	2	...	...	...
Males	...	...	...	...	1	...	1	...	1	...	...	...	...	3	...	" "	...	...	...	...	...	1	1	...	1	...	...	...
Females	...	...	...	1	...	...	...	...	...	...	1	...	...	2	...	" "	...	...	...	...	...	...	...	1	1	...	...	...
Females	...	...	...	...	1	1	...	...	...	...	...	...	...	2	...	Paraplegia	...	...	...	...	1	...	...	1	...	...	...	...
Totals	1	...	...	...	...	1	...	1	1	...	...	1	...	5	5	Peritonitis	...	...	1	1	...	...	...	2	1	...	...	...
Males	1	...	...	...	...	...	...	1	1	...	...	...	...	3	2	"	...	...	...	...	...	...	...	2	1	...	...	...
Females	...	...	...	...	...	1	...	...	...	...	...	1	...	2	3	"	...	...	1	1	...	...	...	...	...	...	...	...
Females	...	...	...	...	...	1	2	...	...	...	...	...	...	3	...	Peritonitis, Puerperal	...	...	...	...	2	1	...	...	...	...	...	...

Totals	...	1	2	1	2	...	...	...	1	2	1	1	...	11	9	Pleurisy	...	1	...	1	...	2	2	3	2	...	...	...
Males	...	1	1	...	1	...	...	...	1	1	1	1	...	7	6	"	...	...	...	...	...	1	2	2	2	...	...	...
Females	...	...	1	1	1	...	...	...	...	1	...	...	...	4	3	"	...	1	...	1	...	1	...	1	...	...	...	...
Totals	22	46	44	24	24	27	17	23	20	27	41	62	1	378	427	Pneumonia *b*	184	14	4	13	22	12	25	36	35	29	2	2
Males	14	30	28	12	14	14	7	12	9	13	27	40	1	221	234	"	96	7	2	6	10	5	15	29	27	20	2	2
Females	8	16	16	12	10	13	10	11	11	14	14	22	...	157	193	"	88	7	2	7	12	7	10	7	8	9	...	...
Totals	3	2	1	5	...	...	1	...	5	4	1	4	1	27	28	Pneumonia, Typhoid	3	...	1	4	3	5	3	2	2	3	...	1
Males	1	2	...	4	...	...	1	...	1	2	1	2	...	14	18	" "	1	...	...	1	...	5	2	2	1	1	...	1
Females	2	...	1	1	...	...	...	...	4	2	...	2	1	13	10	" "	2	...	1	3	3	...	1	...	1	2	...	...
Totals	...	1	...	2	1	2	...	8	2	1	...	3	...	20	16	Poison *c*	8	3	2	1	2	2	1	...	...	...	...	1
Males	...	1	...	...	...	...	...	2	2	...	...	2	...	7	12	"	1	2	1	...	1	...	1	...	...	...	...	1
Females	...	...	...	2	1	2	...	6	...	1	...	1	...	13	4	"	7	1	1	1	1	2	...	...	...	...	...	...
Females	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	Polypus	...	...	...	...	...	...	...	1	...	...	...	...
Totals	...	2	2	7	...	3	1	2	1	1	...	...	...	19	2	Premature Birth	19	...	...	...	...	...	...	...	...	...	...	...
Males	...	2	1	2	...	...	1	2	...	...	...	...	...	8	...	" "	8	...	...	...	...	...	...	...	...	...	...	...
Females	...	...	1	5	...	3	...	...	1	1	...	...	...	11	2	" "	11	...	...	...	...	...	...	...	...	...	...	...
Females	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	Purpura Hæmorrhagica	...	...	...	...	...	...	...	1	...	...	...	...
Males	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	Prostate, Enlargement of	...	...	...	...	...	...	...	...	...	1	...	...
Males	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1	Quinsy	...	...	...	...	...	...	1	...	...	...	...	...
Females	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	"	...	...	...	...	...	...	...	...	...	...	...	...
Totals	1	1	...	1	3	2	4	2	2	3	...	1	...	20	19	Railroad Accident	...	...	2	1	6	4	1	1	1	1	...	3

a 1 Operation for tumor. *b* 2 Pleuro-Pneumonia. *c* 1 Fe. accidentally poisoned by Morphine, and 1 Fe. by overdose of Chloroform.

TABLE XVII.—CONTINUED.

SEX.	MONTHS, 1870.													YEARS.		CAUSES OF DEATH.	AGES.											
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	1870.	1869.		Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Unknown.
Males	1	1	...	1	3	2	4	1	2	3	...	1	...	19	17	Railroad Accident	...	...	2	1	6	4	1	1	1	1	...	2
Females	...	...	...	...	...	...	...	1	...	...	...	...	...	1	2	" "	...	...	...	...	...	...	...	...	...	...	...	1
Females	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	Rash	...	1	...	...	...	...	...	...	...	...	...	...
Females	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	Rachitis	1	...	...	...	...	...	...	...	...	...	...	...
Males	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	Retention of Urine	...	...	...	...	...	...	...	...	...	1	...	...
Totals	1	2	4	2	4	...	1	3	3	1	2	4	...	27	49	Rheumatism	2	...	2	4	1	2	7	1	6	2	...	...
Males	...	2	3	...	2	...	1	3	2	...	1	2	...	16	31	"	1	...	...	2	1	1	6	...	3	2	...	...
Females	1	...	1	2	2	...	...	...	1	1	1	2	...	11	18	"	1	...	2	2	...	1	1	1	3	...	...	...
Males	...	...	1	...	...	...	1	...	...	...	...	...	...	2	...	Rheumatism of Heart	...	...	...	2	...	...	...	...	...	...	...	...
Totals	1	2	2	...	3	2	1	2	...	...	...	1	...	14	...	Rheumatism, Inflammatory	1	3	2	4	...	...	1	...	...	2	1	...
Males	1	...	...	...	1	1	...	...	...	...	...	...	...	3	...	" "	...	1	...	1	...	...	...	...	...	...	1	...
Females	...	2	2	...	2	1	1	2	...	...	...	1	...	11	...	" "	1	2	2	3	...	...	1	...	...	2	...	...
Females	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	Rheumatism, Sciatic	...	...	...	...	...	...	...	1	...	...	...	...
Totals	46	67	78	69	82	69	63	93	89	49	64	82	1	852	252	Scarlatina	581	218	65	17	12	3	4	1	...	...	...	1

Males	24	41	32	29	48	39	27	47	58	25	32	40	1	433	180	Scarlatina
Females	22	26	46	40	39	30	36	46	36	24	32	42	...	419	122	"
Totals	3	5	3	8	2	3	6	3	9	8	7	3	...	60	55	Scrofula
Males	3	3	2	5	1	1	2	2	6	5	1	2	...	33	32	"
Females	...	2	1	3	1	2	4	1	3	3	6	1	...	27	23	"
Males	...	...	...	...	...	...	...	1	...	...	...	...	...	1	1	Scurvy
Totals	1	...	...	1	...	...	...	...	...	3	4	...	...	9	42	Small-pox
Males	...	...	...	1	...	...	...	...	...	2	3	...	...	6	21	"
Females	1	...	...	...	...	...	...	...	...	1	1	...	...	3	21	"
Totals	...	...	...	...	...	...	...	...	1	2	...	...	...	3	...	Sore Mouth
Males	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	" "
Females	...	...	...	...	...	...	...	...	1	1	...	...	...	2	...	" "
Males	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	Spermatorrhœa
Totals	...	...	1	1	...	...	...	...	...	...	...	...	...	2	2	Spina Bifida
Males	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	" "
Females	...	...	...	1	...	...	...	...	...	...	...	...	...	1	2	" "
Totals	1	3	2	4	...	3	1	3	6	3	4	2	1	33	39	Spine Disease
Males	1	2	...	2	...	2	...	2	1	...	2	...	...	12	22	" "
Females	...	1	2	2	...	1	1	1	5	3	2	2	1	21	17	" "
Totals	...	...	1	...	...	...	...	3	...	1	...	...	...	5	...	Spine, Inflammation of
Males	...	...	1	...	...	...	...	1	...	1	...	...	...	3	...	" "
Females	...	...	...	...	...	...	...	2	...	...	...	...	...	2	...	" "

Scarlatina	281	107	33	2	5	2	3	...	...	...	...	...	
"	250	111	32	15	7	1	1	1	...	...	...	1	
Scrofula	35	2	3	7	4	1	2	1	2	1	...	2	
"	24	...	2	3	1	...	...	1	1	1	...	...	
"	11	2	1	4	3	1	2	...	1	...	...	2	
Scurvy	1	...	...	...	...	...	...	...	...	...	...	...	
Small-pox	2	1	2	1	2	1	...	...	...	...	...	...	
"	1	...	1	1	2	1	...	...	...	...	...	...	
"	1	1	1	...	...	...	...	...	...	...	...	...	
Sore Mouth	3	...	...	...	...	...	...	...	...	...	...	...	
" "	1	...	...	...	...	...	...	...	...	...	...	...	
" "	2	...	...	...	...	...	...	...	...	...	...	...	
Spermatorrhœa	...	...	...	...	1	...	...	...	...	...	...	...	
Spina Bifida	2	...	...	...	...	...	...	...	...	...	...	...	
" "	1	...	...	...	...	...	...	...	...	...	...	...	
" "	1	...	...	...	...	...	...	...	...	...	...	...	
Spine Disease	8	3	3	2	3	3	1	3	4	2	...	1	
" "	5	1	1	1	...	1	1	...	1	1	...	...	
" "	3	2	2	1	3	2	...	3	3	1	...	1	
Spine, Inflammation of	3	1	1	...	...	...	...	...	...	...	...	...	
" "	3	...	...	...	...	...	...	...	...	...	...	...	
" "	...	1	1	...	...	...	...	...	...	...	...	...	

TABLE XVII.—CONTINUED.

SEX.	MONTHS, 1870.													YEARS.		CAUSES OF DEATH.	AGES.											
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	1870.	1869.		Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Unknown.
Females	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	Spinal Cord, Inflam'tion of	1	...	...	...	...	...	...	...	...	...	...	...
Males	...	...	...	1	...	...	...	1	...	...	...	...	...	2	...	Spleen Disease	...	...	1	...	...	...	...	1	...	...	...	...
Totals	...	...	...	...	...	...	...	...	...	1	2	...	...	3	...	Spleen Enlargement	...	1	...	...	...	...	1	...	...	1	...	...
Males	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	" "	...	...	...	...	...	...	1	...	...	...	...	...
Females	...	...	...	...	...	...	...	...	...	...	2	...	...	2	...	" "	...	1	...	...	...	...	...	...	...	1	...	...
Totals	7	17	18	17	15	19	20	27	18	17	22	27	2	226	129	Still-born	226	...	...	...	...	...	...	...	...	...	...	...
Males	3	10	10	8	6	15	9	15	8	8	16	16	1	125	64	"	125	...	...	...	...	...	...	...	...	...	...	...
Females	4	6	8	8	8	4	7	9	6	6	5	11	...	82	50	"	82	...	...	...	...	...	...	...	...	...	...	...
Unkno'n	...	1	...	1	1	...	4	3	4	3	1	...	1	19	15	"	19	...	...	...	...	...	...	...	...	...	...	...
Totals	1	1	...	...	...	2	1	3	5	2	1	...	...	16	11	Stomach Disease *a*	5	...	...	...	...	2	...	2	4	2	1	...
Males	...	...	...	...	...	1	1	3	3	...	...	...	...	8	4	" "	3	...	...	...	...	...	...	1	2	2	...	...
Females	1	1	...	...	...	1	...	...	2	2	1	...	...	8	7	" "	2	...	...	...	...	2	...	1	2	...	1	...
Totals	...	1	...	...	...	...	1	...	...	...	...	1	...	3	1	Stomach, Ulceration of	1	...	...	...	...	1	...	1	...	...	...	...
Males	...	...	...	...	...	...	1	...	...	...	...	1	...	2	1	" "	1	...	...	...	...	...	...	1	...	...	...	...

Females		1												1		Stomach, Ulceration of						1						
Males										1				1		Stone in Bladder				1								
Males				1	1		1							3		Strangulation	3											
Males								1						1		Stricture of Urethra												1
Males		2				1	1		1					5		Suddenly	3					1				1		
Totals				1	1				1	1	1	4		9	25	Suffocation	8											1
Males				1							1	2		4	14	"	4											
Females					1				1	1		2		5	11	"	4											1
Totals		1	3	1	2	3	6	1	2	5	6	3	1	34	23	Suicide				4	9	4	6	7	1			3
Males		1	2	1	2	2	3	1	2	4	4	2	1	25	16	"				2	6	1	6	7	1			2
Females			1			1	3			1	2	1		9	7	"				2	3	3						1
Males							4	1		2				7	2	Sun-stroke		1		1	1	1			2	1		
Totals			2	2		1	3			1		1		10	2	Syphilis	1			1	1	1	4		2			
Males			2	2		1	2					1		8	1	"	1			1		1	4		1			
Females							1			1				2	1	"					1				1			
Totals				1	1			2	1	3	1			9	8	Tabes Mesenterica	7							1	1			
Males					1			1		2	1			5	3	" "	4								1			
Females				1				1	1	1				4	5	" "	3							1				
Totals	1	2	3	4	2	4	18	19	14	8	4	3		82	85	Teething	82											
Males		1	1	1	2	1	12	8	7	3	3	3		42	40	"	42											
Females	1	1	2	3		3	6	11	7	5	1			40	45	"	40											

a 1 Tumor of Stomach.

TABLE XVII.—CONTINUED.

SEX.	MONTHS, 1870.													YEARS.		CAUSES OF DEATH.	AGES.											
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	1870.	1869.		Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Unknown.
Males	...	1	6	1	6	2	...	4	...	2	2	2	...	26	84	Measles	19	4	...	...	2	...	1	...	...	...	...	...
Females	...	3	4	7	4	1	5	3	2	...	...	1	...	30	63	"	17	6	...	2	2	2	...	1	...	...	...	...
Males	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	Meningitis	...	...	...	...	...	...	...	...	...	...	...	...
Females	...	...	...	...	...	...	...	1	...	...	...	...	...	1	1	"	1	...	...	...	...	...	...	...	...	...	...	...
Males	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	Meningitis, Cerebro-Spinal	1	...	...	...	...	...	...	...	...	...	...	...
Males	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	Meningitis, Spinal	...	...	...	...	...	...	...	...	...	...	...	...
Females	...	...	...	...	...	...	...	...	...	...	...	1	...	1	4	" "	...	...	...	...	1	...	...	...	...	...	...	...
Males	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	Meningitis, Tubercular	...	...	...	...	...	...	...	...	...	...	...	...
Females	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	" "	...	...	...	...	...	...	...	...	...	...	...	...
Females	2	1	2	3	3	4	1	6	2	5	1	...	...	35	21	Metria (Puer. Fever)	...	...	...	2	17	11	3	...	...	...	...	2
Females	...	...	1	...	1	1	1	1	...	2	...	2	...	9	4	Metritis	...	...	...	1	4	2	2	...	...	...	...	...
Females	...	...	...	...	1	...	...	...	...	1	...	...	...	2	...	Milk Leg	...	...	...	...	...	2	...	...	...	...	...	...
Totals	...	...	...	...	...	...	...	...	...	1	...	1	...	2	7	Mortification	1	...	...	...	1	...	...	...	...	...	...	...
Males	...	...	...	...	...	...	...	...	...	1	...	...	...	1	5	"	1	...	...	...	...	...	...	...	...	...	...	...

Females	---	---	---	---	---	---	---	---	---	---	---	1	---	1	2	Mortification	---	---	---	---	1	---	---	---	---	---	---	---	---
Totals	---	---	---	---	---	---	2	1	1	---	---	---	---	4	6	Murder	---	---	---	---	---	1	2	---	---	1	---	---	---
Males	---	---	---	---	---	---	---	1	---	---	---	---	---	1	5	"	---	---	---	---	---	---	1	---	---	---	---	---	---
Females	---	---	---	---	---	---	2	---	1	---	---	---	---	3	1	"	---	---	---	---	---	1	1	---	---	1	---	---	---
Totals	---	---	---	---	---	2	---	---	1	4	3	---	---	10	3	Nephritis (Inflam. Kidneys)	1	---	---	---	---	1	1	2	1	3	1	---	---
Males	---	---	---	---	---	1	---	---	1	4	3	---	---	9	1	" " "	1	---	---	---	---	1	1	1	1	3	1	---	---
Females	---	---	---	---	---	1	---	---	---	---	---	---	---	1	2	" " "	---	---	---	---	---	---	---	1	---	---	---	---	---
Totals	1	---	---	---	---	---	---	---	---	---	---	1	---	2	---	Nervous Affection	---	---	---	---	---	---	1	---	1	---	---	---	---
Males	---	---	---	---	---	---	---	---	---	---	---	1	---	1	---	" "	---	---	---	---	---	---	---	---	1	---	---	---	---
Females	1	---	---	---	---	---	---	---	---	---	---	---	---	1	---	" "	---	---	---	---	---	---	1	---	---	---	---	---	---
Totals	1	---	1	---	---	1	---	---	---	1	---	3	---	7	7	Neuralgia	---	---	---	---	1	---	2	1	---	3	---	---	---
Males	1	---	---	---	---	---	---	---	---	---	---	---	---	1	4	"	---	---	---	---	---	---	---	---	---	1	---	---	---
Females	---	---	1	---	---	1	---	---	---	1	---	3	---	6	3	"	---	---	---	---	1	---	2	1	---	2	---	---	---
Totals	---	---	1	1	2	4	3	4	5	4	5	7	1	37	47	Noma (Canker)	30	---	1	1	1	2	1	1	---	---	---	---	---
Males	---	---	---	---	---	1	2	2	3	2	3	4	---	17	24	" "	15	---	---	---	---	---	1	1	---	---	---	---	---
Females	---	---	1	1	2	3	1	2	2	2	2	3	1	20	23	" "	15	---	1	1	1	2	---	---	---	---	---	---	---
Totals	---	---	---	1	---	---	---	3	---	---	---	---	---	4	---	Nursing Sore Mouth	2	---	---	---	1	1	---	---	---	---	---	---	---
Males	---	---	---	---	---	---	---	1	---	---	---	---	---	1	---	" " "	1	---	---	---	---	---	---	---	---	---	---	---	---
Females	---	---	---	1	---	---	---	2	---	---	---	---	---	3	---	" " "	1	---	---	---	1	1	---	---	---	---	---	---	---
Totals	9	18	19	17	26	20	25	46	34	39	25	35	---	313	310	Old Age	---	---	---	---	---	---	---	3	18	127	163	2	
Males	6	11	10	6	7	13	13	25	7	18	10	21	---	147	153	" "	---	---	---	---	---	---	---	1	5	61	79	1	
Females	3	7	9	11	19	7	12	21	27	21	15	14	---	166	157	" "	---	---	---	---	---	---	---	2	13	66	84	1	

TABLE XVII.—CONTINUED.

SEX.	MONTHS, 1870.													YEARS.		CAUSES OF DEATH.	AGES.											
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	1870.	1869.		Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Unknown.
Females	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	Operation *a*	...	...	...	...	1	...	...	...	...	...	...	...
Females	...	...	...	...	1	...	...	2	...	...	...	...	...	3	3	Ovarian Tumor	...	...	...	...	1	1	...	...	...	1	...	...
Females	...	...	...	...	...	1	...	...	...	...	1	...	...	2	...	Ovariotomy	...	...	...	...	...	1	1	...	...	...	...	...
Totals	7	6	5	11	7	7	4	13	19	16	12	8	...	115	120	Paralysis	2	...	1	3	2	3	9	15	32	30	13	5
Males	3	4	4	8	4	5	3	5	11	10	4	5	...	66	62	"	1	...	1	...	...	3	5	12	19	17	7	1
Females	4	2	1	3	3	2	1	8	8	6	8	3	...	49	58	"	1	...	...	3	2	...	4	3	13	13	6	4
Totals	...	...	...	1	1	...	1	...	1	...	1	...	...	5	...	Paralysis, General	...	...	...	...	...	1	1	1	2	...	...	...
Males	...	...	...	...	1	...	1	...	1	...	...	...	...	3	...	" "	...	...	...	...	...	1	1	...	1	...	...	...
Females	...	...	...	1	...	...	...	...	...	...	1	...	...	2	...	" "	...	...	...	...	...	...	...	1	1	...	...	...
Females	...	...	...	...	1	1	...	...	...	...	...	...	...	2	...	Paraplegia	...	...	...	...	1	...	...	1	...	...	...	...
Totals	1	...	...	...	...	1	...	1	1	...	...	1	...	5	5	Peritonitis	...	...	1	1	...	...	...	2	1	...	...	...
Males	1	...	...	...	...	...	...	1	1	...	...	...	...	3	2	"	...	...	...	...	...	...	...	2	1	...	...	...
Females	...	...	...	...	...	1	...	...	...	...	...	1	...	2	3	"	...	...	1	1	...	...	...	...	...	...	...	...
Females	...	...	...	...	...	1	2	...	...	...	...	...	...	3	...	Peritonitis, Puerperal	...	...	...	...	2	1	...	...	...	...	...	...

Totals	...	1	2	1	2	...	...	...	1	2	1	1	...	11	9	Pleurisy	...	1	...	1	...	2	2	3	2	...	...	...
Males	...	1	1	...	1	...	...	...	1	1	1	1	...	7	6	"	...	...	...	...	...	1	2	2	2	...	...	...
Females	...	...	1	1	1	...	...	...	...	1	...	...	...	4	3	"	...	1	...	1	...	1	...	1	...	...	...	...
Totals	22	46	44	24	24	27	17	23	20	27	41	62	1	378	427	Pneumonia *b*	184	14	4	13	22	12	25	36	35	29	2	2
Males	14	30	28	12	14	14	7	12	9	13	27	40	1	221	234	"	96	7	2	6	10	5	15	29	27	20	2	2
Females	8	16	16	12	10	13	10	11	11	14	14	22	...	157	193	"	88	7	2	7	12	7	10	7	8	9	...	...
Totals	3	2	1	5	...	...	1	...	5	4	1	4	1	27	28	Pneumonia, Typhoid	3	...	1	4	3	5	3	2	2	3	...	1
Males	1	2	...	4	...	...	1	...	1	2	1	2	...	14	18	" "	1	...	...	1	...	5	2	2	1	1	...	1
Females	2	...	1	1	...	...	...	...	4	2	...	2	1	13	10	" "	2	...	1	3	3	...	1	...	1	2	...	...
Totals	...	1	...	2	1	2	...	8	2	1	...	3	...	20	16	Poison *c*	8	3	2	1	2	2	1	...	...	...	...	1
Males	...	1	...	...	...	...	...	2	2	...	...	2	...	7	12	"	1	2	1	...	1	...	1	...	...	...	...	1
Females	...	...	...	2	1	2	...	6	...	1	...	1	...	13	4	"	7	1	1	1	1	2	...	...	...	...	...	...
Females	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	Polypus	...	...	...	...	...	...	...	1	...	...	...	...
Totals	...	2	2	7	...	3	1	2	1	1	...	...	...	19	2	Premature Birth	19	...	...	...	...	...	...	...	...	...	...	...
Males	...	2	1	2	...	...	1	2	...	...	...	...	...	8	...	" "	8	...	...	...	...	...	...	...	...	...	...	...
Females	...	...	1	5	...	3	...	...	1	1	...	...	...	11	2	" "	11	...	...	...	...	...	...	...	...	...	...	...
Females	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	Purpura Hæmorrhagica	...	...	...	...	...	...	...	1	...	...	...	...
Males	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	Prostate, Enlargement of	...	...	...	...	...	...	...	...	...	1	...	...
Males	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1	Quinsy	...	...	...	...	...	...	1	...	...	...	...	...
Females	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	"	...	...	...	...	...	...	...	...	...	...	...	...
Totals	1	1	...	1	3	2	4	2	2	3	...	1	...	20	19	Railroad Accident	...	...	2	1	6	4	1	1	1	1	...	3

a 1 Operation for tumor. *b* 2 Pleuro-Pneumonia. *c* 1 Fe. accidentally poisoned by Morphine, and 1 Fe. by overdose of Chloroform.

TABLE XVII.—CONTINUED.

SEX.	MONTHS, 1870.													YEARS.		CAUSES OF DEATH.	AGES.											
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	1870.	1869.		Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Unknown.
Males	1	1	...	1	3	2	4	1	2	3	...	1	...	19	17	Railroad Accident	...	...	2	1	6	4	1	1	1	1	...	2
Females	...	...	...	...	...	...	...	1	...	...	...	...	...	1	2	" "	...	...	...	...	...	...	...	...	...	...	...	1
Females	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	Rash	...	1	...	...	...	...	...	...	...	...	...	...
Females	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	Rachitis	1	...	...	...	...	...	...	...	...	...	...	...
Males	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	Retention of Urine	...	...	...	...	...	...	...	...	...	1	...	...
Totals	1	2	4	2	4	...	1	3	3	1	2	4	...	27	49	Rheumatism	2	...	2	4	1	2	7	1	6	2	...	...
Males	...	2	3	...	2	...	1	3	2	...	1	2	...	16	31	"	1	...	...	2	1	1	6	...	3	2	...	...
Females	1	...	1	2	2	...	...	...	1	1	1	2	...	11	18	"	1	...	2	2	...	1	1	1	3	...	...	...
Males	...	...	1	...	...	...	1	...	...	...	...	...	...	2	...	Rheumatism of Heart	...	...	...	2	...	...	...	...	...	...	...	...
Totals	1	2	2	...	3	2	1	2	...	...	...	1	...	14	...	Rheumatism, Inflammatory	1	3	2	4	...	...	1	...	...	2	1	...
Males	1	...	...	...	1	1	...	...	...	...	...	...	...	3	...	" "	...	1	...	1	...	...	...	...	...	...	1	...
Females	...	2	2	...	2	1	1	2	...	...	...	1	...	11	...	" "	1	2	2	3	...	...	1	...	...	2	...	...
Females	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	Rheumatism, Sciatic	...	...	...	...	...	...	...	1	...	...	...	...
Totals	46	67	78	69	82	69	63	93	89	49	64	82	1	852	252	Scarlatina	531	218	65	17	12	3	4	1	...	...	...	1

Males	24	41	32	29	48	39	27	47	58	25	32	40	1	433	180	Scarlatina	281	107	33	2	5	2	3	...	...	...	...	...
Females	22	26	46	40	39	30	36	46	36	24	32	42	...	419	122	"	250	111	32	15	7	1	1	1	...	...	...	1
Totals	3	5	3	8	2	3	6	3	9	8	7	3	...	60	55	Scrofula	35	2	3	7	4	1	2	1	2	1	...	2
Males	3	3	2	5	1	1	2	2	6	5	1	2	...	33	32	"	24	...	2	3	1	...	...	1	1	1	...	...
Females	...	2	1	3	1	2	4	1	3	3	6	1	...	27	28	"	11	2	1	4	3	1	2	...	1	...	...	2
Males	...	...	...	...	...	...	...	1	...	...	...	...	...	1	1	Scurvy	1	...	...	...	...	...	...	...	...	...	...	...
Totals	1	...	...	1	...	...	...	...	...	3	4	...	...	9	42	Small-pox	2	1	2	1	2	1	...	...	...	...	...	...
Males	...	...	...	1	...	...	...	...	...	2	3	...	...	6	21	"	1	...	1	1	2	1	...	...	...	...	...	...
Females	1	...	...	...	...	...	...	...	...	1	1	...	...	3	21	"	1	1	1	...	...	...	...	...	...	...	...	...
Totals	...	...	...	...	...	...	...	...	1	2	...	...	...	3	...	Sore Mouth	3	...	...	...	...	...	...	...	...	...	...	...
Males	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	" "	1	...	...	...	...	...	...	...	...	...	...	...
Females	...	...	...	...	...	...	...	...	1	1	...	...	...	2	...	" "	2	...	...	...	...	...	...	...	...	...	...	...
Males	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	Spermatorrhœa	...	...	...	...	1	...	...	...	...	...	...	...
Totals	...	...	1	1	...	...	...	...	...	...	...	...	...	2	2	Spina Bifida	2	...	...	...	...	...	...	...	...	...	...	...
Males	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	" "	1	...	...	...	...	...	...	...	...	...	...	...
Females	...	...	...	1	...	...	...	...	...	...	...	...	...	1	2	" "	1	...	...	...	...	...	...	...	...	...	...	...
Totals	1	3	2	4	...	3	1	3	6	3	4	2	1	33	39	Spine Disease	8	3	3	2	3	3	1	3	4	2	...	1
Males	1	2	...	2	...	2	...	2	1	...	2	...	...	12	22	" "	5	1	1	1	...	1	1	...	1	1	...	...
Females	...	1	2	2	...	1	1	1	5	3	2	2	1	21	17	" "	3	2	2	1	3	2	...	3	3	1	...	1
Totals	...	...	1	...	...	...	...	3	...	1	...	...	...	5	...	Spine, Inflammation of	3	1	1	...	...	...	...	...	...	...	...	...
Males	...	...	1	...	...	...	...	1	...	1	...	...	...	3	...	" "	3	...	...	...	...	...	...	...	...	...	...	...
Females	...	...	...	...	...	...	...	2	...	...	...	...	...	2	...	" "	...	1	1	...	...	...	...	...	...	...	...	...

TABLE XVII.—CONTINUED.

SEX.	MONTHS, 1870.													YEARS.		CAUSES OF DEATH.	AGES.											
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	1870.	1869.		Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Unknown.
Females	---	---	---	1	---	---	---	---	---	---	---	---	---	1	---	Spinal Cord, Inflam'tion of	1	---	--	---	---	---	---	---	---	---	---	---
Males	---	---	---	1	---	---	---	1	---	---	---	---	---	2	---	Spleen Disease	---	---	1	---	---	---	---	1	---	---	---	---
Totals	---	---	---	---	---	---	---	---	---	1	2	---	---	3	---	Spleen Enlargement	---	1	---	---	---	---	1	---	---	1	---	---
Males	---	---	---	---	---	---	---	---	---	1	---	---	---	1	---	" "	---	---	---	---	---	---	1	---	---	---	---	---
Females	---	---	---	---	---	---	---	---	---	---	2	---	---	2	---	" "	---	1	---	---	---	---	---	---	---	1	---	---
Totals	7	17	18	17	15	19	20	27	18	17	22	27	2	226	129	Still-born	226	---	---	---	---	---	---	---	---	---	---	---
Males	3	10	10	8	6	15	9	15	8	8	16	16	1	125	64	"	125	---	---	--	---	---	---	---	---	---	---	---
Females	4	6	8	8	8	4	7	9	6	6	5	11	---	82	50	"	82	---	---	---	---	---	---	---	---	---	---	---
Unkno'n.	---	1	---	1	1	---	4	3	4	3	1	---	1	19	15	"	19	---	---	---	---	---	---	---	---	---	---	---
Totals	1	1	---	---	---	2	1	3	5	2	1	---	---	16	11	Stomach Disease *a*	5	---	---	---	---	2	---	2	4	2	1	---
Males	---	---	---	---	---	1	1	3	3	---	---	---	---	8	4	" "	3	---	--	---	---	---	---	1	2	2	---	---
Females	1	1	---	---	---	1	---	---	2	2	1	---	---	8	7	" "	2	---	---	---	---	2	---	1	2	---	1	---
Totals	---	1	---	---	---	---	1	---	---	---	---	1	---	3	1	Stomach, Ulceration of	1	---	---	---	---	1	---	1	---	---	---	---
Males	---	---	---	---	---	---	1	---	---	---	---	1	---	2	1	" "	1	---	---	---	---	---	---	1	---	---	---	---

Females	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	Stomach, Ulceration of	...	...	...	...	...	1	...	...	...	...	...	...
Males	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	Stone in Bladder	...	...	...	1	...	...	...	...	...	...	...	...
Males	...	...	...	1	1	...	1	...	...	...	...	...	...	3	...	Strangulation	3	...	...	...	...	...	...	...	...	...	...	...
Males	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	Stricture of Urethra	...	...	...	...	...	...	...	...	...	...	...	1
Males	...	2	...	...	...	1	1	...	1	...	...	...	...	5	...	Suddenly	3	...	...	...	...	1	...	...	...	1	...	...
Totals	...	...	...	1	1	...	...	...	1	1	1	4	...	9	25	Suffocation	8	...	...	...	...	...	...	...	...	...	...	1
Males	...	...	...	1	...	...	...	...	...	...	1	2	...	4	14	"	4	...	...	...	...	...	...	...	...	...	...	...
Females	...	...	...	...	1	...	...	...	1	1	...	2	...	5	11	"	4	...	...	...	...	...	...	...	...	...	...	1
Totals	...	1	3	1	2	3	6	1	2	5	6	3	1	84	23	Suicide	...	...	...	4	9	4	6	7	1	...	...	3
Males	...	1	2	1	2	2	3	1	2	4	4	2	1	25	16	"	...	...	...	2	6	1	6	7	1	...	...	2
Females	...	...	1	...	...	1	3	...	...	1	2	1	...	9	7	"	...	...	...	2	3	3	...	...	...	...	...	1
Males	...	...	...	...	...	...	4	1	...	2	...	...	...	7	2	Sun-stroke	...	1	...	1	1	1	...	...	2	1	...	...
Totals	...	...	2	2	...	1	3	...	...	1	...	1	...	10	2	Syphilis	1	...	...	1	1	1	4	...	2	...	...	...
Males	...	...	2	2	...	1	2	...	...	...	...	1	...	8	1	"	1	...	...	1	...	1	4	...	1	...	...	...
Females	...	...	...	...	...	...	1	...	...	1	...	...	...	2	1	"	...	...	...	...	1	...	...	...	1	...	...	...
Totals	...	...	...	1	1	...	...	2	1	3	1	...	...	9	8	Tabes Mesenterica	7	...	...	...	...	...	...	1	1	...	...	...
Males	...	...	...	...	1	...	...	1	...	2	1	...	...	5	3	" "	4	...	...	...	...	...	...	...	1	...	...	...
Females	...	...	...	1	...	...	...	1	1	1	...	...	...	4	5	" "	3	...	...	...	...	...	...	1	...	...	...	...
Totals	1	2	3	4	2	4	18	19	14	8	4	3	...	82	85	Teething	82	...	...	...	...	...	...	...	...	...	...	...
Males	...	1	1	1	2	1	12	8	7	3	3	3	...	42	40	"	42	...	...	...	...	...	...	...	...	...	...	...
Females	1	1	2	3	...	3	6	11	7	5	1	...	...	40	45	"	40	...	...	...	...	...	...	...	...	...	...	...

a 1 Tumor of Stomach.

TABLE XVII.—CONTINUED.

SEX.	MONTHS, 1870.													YEARS.		CAUSES OF DEATH.	AGES.											
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	1870.	1869.		Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Unknown.
Males	...	...	...	...	...	2	...	...	...	1	2	...	...	5	8	Tetanus	1	2	...	...	2	...	...	...	...	...	...	...
Females	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	"	...	...	...	...	...	...	...	...	...	...	...	...
Totals	...	2	1	2	1	...	2	4	1	2	1	9	...	19	23	Throat Disease	14	1	2	...	1	...	1	...	...	...	...	...
Males	...	...	...	...	1	...	1	3	1	...	1	3	...	10	12	" "	9	...	1	...	...	...	...	...	...	...	...	...
Females	...	2	1	2	...	...	1	1	...	2	...	...	...	9	11	" "	5	1	1	...	1	...	1	...	...	...	...	...
Totals	...	...	1	1	2	1	...	4	7	3	...	...	...	19	5	Thrush	17	...	...	...	...	1	...	...	1	...	...	...
Males	...	...	1	1	1	...	...	2	4	2	...	...	...	11	3	"	11	...	...	...	...	...	...	...	...	...	...	...
Females	...	...	...	...	1	1	...	2	3	1	...	...	...	8	2	"	6	...	...	...	...	1	...	...	1	...	...	...
Females	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	Tumor, Fibrous	...	...	...	...	...	...	1	...	...	...	...	...
Males	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	Tumor on Neck	1	...	...	...	...	...	...	...	...	...	...	...
Totals	...	...	1	1	1	...	1	3	...	2	2	...	...	11	17	Tumor, unspecified	2	...	...	...	1	1	2	2	2	1	...	...
Males	...	...	...	1	1	...	...	1	...	1	...	...	...	4	4	" "	1	...	...	...	...	...	...	1	1	1	...	...
Females	...	...	1	...	...	...	1	2	...	1	2	...	...	7	13	" "	1	...	...	...	1	1	2	1	1	...	...	...
Females	...	...	...	...	...	1	...	...	...	1	...	1	...	3	1	Turn of Life	...	...	...	...	...	...	1	2	...	...	...	...

Totals	...	1	...	...	1	...	...	2	2	...	2	...	...	8	3	Ulcer of Intestines	2	3	...	...	...	1	...	...	2	...	...	...
Males	...	1	...	...	...	...	...	1	1	...	2	...	...	5	2	" "	2	2	...	...	...	...	...	...	1	...	...	...
Females	...	...	...	...	1	...	...	1	1	...	...	...	...	3	1	" "	...	1	...	...	...	1	...	...	1	...	...	...
Females	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	Ulceration of Throat	...	...	...	...	...	...	1	...	...	...	...	...
Females	...	...	...	...	...	...	...	1	1	...	...	...	...	2	...	Ulceration of Uterus	...	...	...	...	...	...	1	1	...	...	...	...
Totals	...	...	1	...	...	...	...	1	1	1	...	2	...	6	12	Ulcers, unspecified *a*	...	1	...	...	...	...	...	1	3	1	...	...
Males	...	...	...	...	...	...	...	...	1	1	...	1	...	3	7	" "	...	...	...	...	...	...	...	...	2	1	...	...
Females	...	...	1	...	...	...	...	1	...	...	...	1	...	3	5	" "	...	1	...	...	...	...	...	1	1	...	...	...
Totals	46	57	99	81	67	88	120	175	147	124	94	92	16	1206	1264	Unknown	803	34	20	24	55	33	39	44	44	31	8	71
Males	26	32	54	41	32	44	66	98	81	69	45	49	6	648	655	"	443	19	11	6	22	12	17	28	27	17	6	35
Females	19	24	43	39	35	42	58	75	66	58	48	42	9	548	590	"	350	15	9	18	33	21	22	16	17	14	2	31
Unkno'n	1	1	2	1	...	2	1	2	...	2	1	1	1	15	19	"	10	...	...	...	...	...	...	...	...	...	...	5
Females	...	...	...	1	1	...	...	...	...	...	...	1	...	3	7	Uterus Disease	...	...	...	...	...	1	...	1	1	...	...	...
Males	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	Vaccination	1	...	...	...	...	...	...	...	...	...	...	...
Females	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	Venereal Disease	...	...	...	1	...	...	...	...	...	...	...	...
Males	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	Venereal Mortif. of Penis	...	...	...	...	1	...	...	...	...	...	...	...
Females	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	Wen *b*	...	...	...	...	...	...	...	1	...	...	...	...
Totals	...	...	...	1	...	...	...	1	...	...	...	1	...	3	4	White Swelling	1	...	...	...	1	1	...	...	...	...	...	...
Males	...	...	...	1	...	...	...	...	...	...	...	...	...	1	3	" "	1	...	...	...	...	...	...	...	...	...	...	...
Females	...	...	...	...	...	...	...	1	...	...	...	1	...	2	1	" "	...	...	...	...	1	1	...	...	...	...	...	...
Totals	...	7	10	10	20	8	17	16	13	8	9	1	...	119	158	Whooping Cough	113	5	...	...	...	...	...	...	1	...	...	...

a 8 Fever sore.

b Wen on neck.

TABLE XVII.—CONTINUED.

SEX.	MONTHS, 1870.													YEARS.		CAUSES OF DEATH.	AGES.											
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	1870.	1869.		Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Unknown.
Males	...	4	4	4	12	5	10	6	5	8	2	...	...	55	78	Whooping Cough	58	2	...	...	...	...	...	...	...	...	...	...
Females	...	3	6	6	8	3	7	10	8	5	7	1	...	64	80	" "	60	3	...	...	...	...	...	...	1	...	...	...
Totals	...	...	...	1	1	...	...	1	...	1	1	...	...	5	10	Worms	5	...	...	...	...	...	...	...	...	...	...	...
Males	...	...	...	...	...	...	...	1	...	1	1	...	...	3	5	"	3	...	...	...	...	...	...	...	...	...	...	...
Females	...	...	...	1	1	...	...	...	...	...	...	...	...	2	5	"	2	...	...	...	...	...	...	...	...	...	...	...
Males	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	Wound	...	...	...	...	...	...	...	...	...	...	...	1
Males	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	Wound, War of 1812	...	...	...	...	...	...	...	...	...	...	...	...

It is gratifying to remark that although there were still 1,206 deaths of which the cause was not stated, the apparent causes of death were specified in a much greater proportion of cases for deaths in 1870, than for any previous year. Consequently, Table XVII. is more complete than was the similar one—Table XVI.—in last report. It furnishes material which without doubt will be very valuable, if sufficient time shall be devoted to its study in connection with such other tables as those concerning climate, sex, age, etc., as shall serve the purpose of ascertaining with certainty the predisposing causes, or the nature of the conditions essential to the production or existence of even one of the important apparent causes specified in the returns. Very little systematic effort has been put forth, and very little has yet been accomplished, in the way of ascertaining the actual causes of the groups of symptoms which are so well known as Consumption, Pneumonia, Typhoid Fever, and various other causes which, when once specified, apparently satisfy a large proportion of the people. Many intelligent physicians, however, at the present time, are directing their attention beyond the causes recognized in systems of nomenclature and nosology, and it is hoped that these tables, which have been compiled with pains-taking care, may aid them in such pursuits. No one man alone can do justice to so many subjects as are annually suggested by the material collected in these reports. The compiler has aimed to concentrate his energies as much as possible upon what appeared to be the most important causes of death, and even then could not, in most cases, hope to exhaust the subjects, but trusts that others may take up and continue the subjects already begun, and also those which cannot receive the attention to which their importance entitles them.

TABLE XVIII.

Order of Succession of Fifteen Principal Causes of Death, exhibiting for each Specified Cause, by Sex, the Number of Deaths, Per Cent of Deaths from each Cause to Population, Persons Living to One Death, and Per Cent of Deaths from Each Cause to Deaths from All Causes, for the Year ending December 31st, 1870.

Order.	Specified Causes.	Number of Deaths.			Per Cent of Population, 1870. *a*			Persons Living to one Death.			Per Cent of Deaths from all Causes.		
		Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.
1	Consumption	*b* 1,451	697	758	.125	.116	.136	794	861	733	13.47	12.47	14.64
2	Scarlatina	852	433	419	.073	.072	.075	1,353	1,387	1,318	7.91	7.74	8.15
3	Fever, Typhoid	574	270	304	.049	.044	.055	2,009	2,225	1,817	5.33	4.83	5.91
4	Diarrhea *c*	407	207	200	.035	.034	.036	2,833	2,902	2,762	3.78	3.70	3.89
5	Pneumonia	376	219	157	.032	.036	.028	3,067	2,743	3,519	3.49	3.91	3.05
6	Dysentery *c*	374	198	176	.032	.032	.031	3,033	3,034	3,139	3.47	3.54	3.42
7	Old Age	313	147	166	.027	.024	.029	3,684	4,087	3,328	2.90	2.63	3.22
8	Convulsions and Fits	*b* 281	167	113	.024	.027	.020	4,104	3,597	4,889	2.61	2.98	2.19
9	Heart Disease	258	145	113	.022	.024	.020	4,470	4,143	4,889	2.39	2.59	2.19
10	Dropsy	246	103	143	.021	.017	.025	4,688	5,833	3,864	2.28	1.84	2.78
11	Cephalitis	233	108	125	.020	.017	.022	4,950	5,563	4,420	2.16	1.93	2.43
12	Brain Disease	214	132	82	.018	.021	.014	5,389	4,551	6,738	1.98	2.36	1.59
13	Enteritis	187	97	90	.016	.016	.016	6,167	6,193	6,139	1.73	1.73	1.75
14	Cholera Infantum	181	98	83	.015	.016	.015	6,372	6,130	6,657	1.68	1.75	1.61
15	Casualty	174	150	24	.015	.024	.004	6,628	4,005	23,023	1.61	2.68	4.66
	Total	6,121	3,171	2,643	.530	.527	.479	188	189	208	56.85	56.73	51.51
	All Causes	10,766	5,589	5,140	.933	.930	.930	107	107	107	100.00	100.00	100.00

a Except of counties and townships from which no returns of deaths were received. *b* Includes one of unknown sex.
c Acute and chronic.

More than one-half of all the deaths returned for the year 1870 resulted from the fifteen specified causes in Table XVIII. The list is not the same as for 1869, and the several causes are not found in the same order. Scarlatina, which was sixth in the order in last report, is second in this, having caused the death of more than three times as many persons, the number in last report being 252. Consumption heads the list for 1870, as in previous years in this State, and as is the case in other States and countries, with only occasional exceptions for Diphtheria, Scarlatina, or Cholera. Being a constantly acting cause, it creates no general alarm, and yet would result in more deaths, even if it only appeared occasionally, than many causes much more commonly feared; while as it continues through every year, the aggregate mortality from this disease becomes great indeed. In last report it was remarked that more than one-eighth of all the deaths were attributed to this cause, and the same is true of the deaths in 1870. The table is more complete than the similar one in the last report, in that the several items are exhibited for each sex, instead of simply for the total of both sexes. A more complete view of some of the most important causes of death will appear further on.

TABLE XIX.

Deaths from Ten Specified Causes during the Year 1870; Exhibiting the Number of Each Sex, Total Number in Each Month, and at Different Periods of Age.

SEX, MONTHS, AND AGES.		CAUSES OF DEATH.									
		Cancer.	Cephalitis.	Croup.	Diarrhea.	Diphtheria.	Dysentery.	Measles.	Scarlatina.	Typhoid Fever.	Whooping Cough.
Sex	Totals	120	233	127	378	121	373	56	852	574	119
	Males	47	108	73	191	56	197	26	433	270	55
	Females	73	125	54	187	65	176	30	419	304	64
Months	January	1	7	9	2	12	-----	-----	46	10	-----
	February	5	15	8	6	8	-----	4	67	17	7
	March	11	11	8	3	12	-----	10	78	33	10
	April	6	17	5	6	1	2	8	69	12	10
	May	13	15	3	6	7	4	10	82	17	29
	June	14	14	4	23	6	9	3	69	17	8
	July	15	29	4	88	6	57	5	63	34	17
	August	15	39	8	114	9	181	7	93	64	16
	September	8	38	13	68	9	114	2	89	106	13
	October	13	22	22	44	21	31	2	49	117	8
	November	14	13	20	11	12	17	2	64	94	9
	December	5	13	23	6	18	8	3	82	52	1
	Unknown	-----	-----	-----	1	-----	-----	-----	1	1	-----
	Av. Month *a*	10.00	19.41	10.58	31.41	10.08	31.08	4.66	70.91	47.75	9.91
Ages	Under 5	4	145	112	332	70	286	36	531	57	113
	5 to 10	1	31	14	9	31	17	10	218	49	5
	10 to 15	2	13	-----	-----	12	8	-----	65	58	-----
	15 to 20	1	9	-----	-----	4	2	2	17	82	-----
	20 to 30	1	8	-----	4	1	7	4	12	119	-----
	30 to 40	13	9	-----	6	-----	6	2	3	54	-----
	40 to 50	19	1	-----	3	-----	7	1	4	48	-----
	50 to 60	37	7	-----	3	-----	8	1	1	49	-----
	60 to 70	28	3	-----	4	1	16	-----	-----	37	1
	70 to 80	12	4	1	6	1	12	-----	-----	20	-----
	80 and over	2	-----	-----	4	-----	1	-----	-----	1	-----
	Unknown	-----	3	-----	7	1	3	-----	1	5	-----

a Excluding deaths in unknown month.

TABLE XX.

Percentage of Deaths during the Year ending December 31st, 1870, from each of Ten Specified Causes, to Deaths from All Causes; and Per Centage of Each Sex, of Deaths in Each Month and at Different Periods of Life, to Total Deaths from each Specified Cause.

SEX, MONTHS, AND AGES.		CAUSES OF DEATH.									
		Cancer.	Cephalitis.	Croup.	Diarrhea.	Diphtheria.	Dysentery.	Measles.	Scarlatina.	Typhoid Fever.	Whooping Cough.
	Per cent of all causes	1.11	2.16	1.17	3.51	1.12	3.46	0.52	7.91	5.33	1.10
Sex	Males	39.16	46.35	57.54	50.52	46.28	52.81	46.42	50.82	47.03	46.21
	Females	60.83	53.64	42.51	49.47	53.71	47.18	53.57	49.17	52.96	53.78
Months	January	.83	3.00	7.08	.52	9.91	.....	.....	5.39	1.74	.....
	February	4.16	6.43	6.29	1.58	6.61	.....	7.14	7.86	2.96	5.88
	March	9.16	4.72	6.29	.79	9.91	.....	17.85	9.15	5.74	8.40
	April	5.00	7.29	3.93	1.58	.82	.53	14.28	8.09	2.09	8.40
	May	10.83	6.43	2.36	1.58	5.78	1.07	17.85	9.62	2.96	16.80
	June	11.66	6.00	3.14	6.08	4.95	2.41	5.35	8.09	2.96	6.72
	July	12.50	12.44	3.14	23.28	4.95	15.28	8.92	7.39	5.92	14.28
	August	12.50	16.73	6.29	30.15	7.43	35.12	12.50	10.91	11.14	13.44
	September	6.66	16.30	10.23	17.98	7.43	30.56	3.57	10.44	18.46	10.92
	October	10.83	9.44	17.32	11.64	17.35	8.31	3.57	5.75	20.38	6.72
	November	11.66	5.57	15.74	2.91	9.91	4.55	3.57	7.51	16.37	7.56
	December	4.16	5.57	18.11	1.58	14.87	2.14	5.35	9.62	9.05	.84
	Unknown	.....	.....	.....	.26	.....	.....	.....	.11	.17	.....
	Av. Month *a*	8.33	8.33	8.33	8.31	8.33	8.33	8.33	8.32	8.31	8.33
Ages	Under 5	3.33	62.23	88.18	87.83	57.85	76.67	64.28	62.32	9.93	94.95
	5 to 10	.83	13.30	11.04	2.38	25.61	4.55	17.85	25.58	8.53	4.20
	10 to 15	1.66	5.57	.....	.....	9.91	2.14	.....	7.62	9.23	.....
	15 to 20	.83	3.86	.....	.....	3.30	.53	3.57	1.99	14.28	.....
	20 to 30	.83	3.43	.....	1.05	.82	1.87	7.14	1.40	20.73	.....
	30 to 40	10.83	3.86	.....	1.58	.....	1.60	3.57	.35	9.40	.....
	40 to 50	15.83	.42	.....	.79	.....	1.87	1.78	.46	8.36	.....
	50 to 60	30.83	3.00	.....	.79	.....	2.14	1.78	.11	8.53	.....
	60 to 70	23.33	1.28	.....	1.05	.82	4.28	.....	.....	6.44	.84
	70 to 80	10.00	1.71	.78	1.58	.82	3.21	.....	.....	3.48	.....
	80 and over	1.66	.....	.....	1.05	.....	.26	.....	.....	.17	.....
	Unknown	.....	1.28	.....	1.85	.82	.80	.....	.11	.87	.....

a Excluding deaths in unknown month.

Tables XIX. and XX. are similar to Tables XII. and XIII. in last report, and exhibit the marked influence of sex, season, and age upon the death-rate of some of the most important diseases. Consumption and Pneumonia were omitted, as in last report, for the reason that they were considered worthy of special study in tables by themselves. The several diseases included in these two tables will be noticed in the alphabetical order in which they appear in the tables.

Cancer.—One hundred and twenty deaths were returned as caused by cancer,—seven more than in 1869. Of these, 73, or 60.83 per cent, were females. The average per cent of deaths of females from all causes was 47.90, showing a difference of 12.93 per cent more deaths of females from cancer than the average from all causes; and from this cause, considered by itself, 21.67 per cent more females than males. The influence of season does not appear to have been very marked, although more deaths occurred during the summer and autumn than in the winter and spring months. A very large proportion of the deaths were of persons in middle life and old age. It was remarked in last report that "If these several facts are found thus grouped together through a sufficient number of years to establish this collection of conditions as the general rule, it is believed that the evidence will be sufficient, taken in connection with what has already been worked out by the medical profession, to demonstrate the essential nature of cancer."

As to many, even among physicians, this may not be very apparent, it may be well to group together some few facts already established, and thus furnish a starting point from which some one, having the time and talent, may be able to carry out the demonstration above referred to. In the first place, although the location of the disease and other details were not given in a sufficient number of cases to prove much, it may be remarked that, out of the thirty females who died from cancer in 1870, of which the location of the disease was stated, twelve had cancer of the breast, eight of the stomach,

three of the uterus, two of the mouth, and one each of the face, jaw, chin, eye, and lungs. Of the twenty-two males of which the location was stated, fourteen had cancer of the stomach, two of the back, two of the face, and one each of the tongue, liver, rectum, and anus. In a large proportion of cases the disease is located in a secreting gland, upon a mucous membrane, or upon the skin,—parts having functions rendering them particularly subject normally from time to time to be worn out, disintegrated, and renewed; and is especially likely to be located in the mammary glands of females, and upon the reproductive organs of both sexes. Among the facts to be taken into consideration, one is that one function of both sexes, and particularly of females, is to regularly separate and throw off a certain amount of substance in efforts towards the formation of new organisms; and at other times females supply a certain amount of substance to form milk as food for offspring. Another important fact in this connection is that cells, microscopically similar to cancer cells, are uniformly found normally present on the uterine surface of the placenta after it has been thrown off at term; indicating this as the natural method of separating from the body tissues which are no longer of service. The fact to be placed next in connection with this is, that cancer as a rule attacks organs whose proper functions have from some cause ceased. The breasts of widows, and in females past the age for bearing children, the uterus, appears to be attacked with comparative frequency. Rudimentary organs, such as the mammary gland in man, if injured, sometimes assume cancerous characters, as also do these glands in females before the time of life arrives for them to assume their proper function. Another fact is that tumors of all kinds, if allowed to remain on the body, tend, after the lapse of time, to take on cancerous growth or modification. This is particularly the case with warts, a kind of tumor made up of an abnormal aggregation of modified epidermis or scarf-skin, which should naturally, as before intimated, continually desquamate and be replaced by new.

The condensed style of statement adapted to this report is not very favorable to a full and comprehensive treatment of such a question, but may serve to give a concise, even if not complete and perfected, view of this important subject. The aim of the writer has been to present some of the most tangible reasons why he believes that cancer need no longer be shrouded in mystery; that not only may its essential nature be easily explained, but in so doing the method of its proper treatment, and particularly of its prevention, is indicated.

The evidence appears to be that cancer sometimes results from disease of organs whose proper functions are such that their substance is normally rapidly wasted, changed, and renewed by the wear and excitement of healthy use. It is composed of substance of lower grade than healthy tissue, and may be produced by a sluggish action resulting from lack of proper natural stimulus, and possibly by degeneration of old tissue which has not undergone the normal interstitial changes dependent upon functional activity. Cancer appears to be in many cases the natural method of the body to rid itself of old or injured tissue no longer performing a useful function. In other cases, and particularly in young subjects, it appears quite probable that it may result from a retention in or upon the organism of lowly organized matter, which should under proper and healthful conditions be regularly thrown off and replaced by new substance. It is more frequent among the old than the young, and in the autumn than in the spring. There is a certain analogy between cancer and "the sere and yellow leaf," which may serve to fix in mind the principle, and the time, and even extends to the color, for the peculiar straw color is characteristic of the cancerous cachexia or condition.

The indications for its prevention are *the maintenance of regular and constant change and renewal of all the tissues* which is best done by exercise in the open air, by cleanliness,

by the early removal of all tumors and injured substance, and especially by the habitual proper use of every part of the body. All these precautions become particularly important as old age approaches.

This does not appear to be a proper place in which to discuss the treatment of cancer, which, however, must be apparent to physicians if the foregoing is a true outline of its essential nature; and the fact that the treatment heretofore found to be most effectual is in accordance with these views, is another evidence of their correctness. It is hoped that they may be disproved if incorrect, and acted upon if found to be true. The subject certainly appears to be of sufficient importance to warrant full investigation. The writer could no longer refrain from giving the people any possible benefit which might arise from the suggestions, even though the desire was strong to continue to wait for a more favorable opportunity in a less restricted field.

Cephalitis.—In last report it appeared that more deaths of males than of females resulted from this disease, the per cent being 53.98 males, 46.01 females. For 1870 the per cent is almost precisely reversed; being 46.35 males, 53.64 females.

The greatest number of deaths occurred in August, the next greatest in September, then July; October, also had more than the average number of deaths.

The order of mortality by months was so closely like that from all causes as again to suggest, as noticed in last report, that the disease, or at least the mortality from it, seems to have resulted from the same general cause which increased the mortality from all causes in certain months; and is obviously connected in some way with the increased heat of summer; the greatest mortality occurring after the period of greatest heat. Possibly it may have a still closer connection with the time of obtaining fruit and vegetables, more or less ripe, cooked and uncooked; brain trouble among children frequently being traceable to a wrong condition of the stomach and bowels.

Three-fourths of the deaths from this disease were of children under ten, and 62.23 per cent were of children under five years of age.

Croup.—From this disease there were more deaths of males than females; the proportion of each sex being 57.54 per cent of males, and 42.51 per cent of females.

In 1870, as in 1869, the greatest number in any one month, occurred in December, and there were also more than an average number of deaths in the autumn months. In January and February, however, there were not quite the average number.

All deaths but one were of children under ten, and 88.18 per cent were under five years of age.

In last report an hypothesis of the compiler was tested by a combination of meteorological statistics with those of deaths from croup. There was found to have been a coincidence between the condition of the atmosphere, as regards warmth, moisture, and uniformity of temperature, as shown in a meteorological table from Monroe, and the deaths from croup; the number of deaths by months being in proportion to the absence of warmth, moisture, and uniformity of temperature of the air. It was remarked that the meteorological observations employed were of atmospheric conditions in the open air, and the fact was also indicated that some difference of calculation must be made for the different capacity of cold and warm air for moisture. If the temperature were uniform throughout the year a statement of the relative humidity would be sufficient for comparison with the deaths. The temperature of the air passing out of the air-passages of human beings is believed to be fixed, or nearly so, the temperature shown by a thermometer under the tongue being about 98° Fahrenheit, it is probable that the temperature of the expired air does not vary greatly from this, and as those passages are naturally supplied with moisture, the quantity of vapor in a given quantity of air exhaled from the lungs must be nearly

uniform throughout all temperatures. The capacity of air for moisture being different when cold than when warm, the quantity of vapor entering the air passages must be different at different temperatures, supposing the air to contain all it can in every case; consequently the relative humidity is not sufficient for our purposes of comparison, as it only expresses the percentage of saturation at the temperatures existing when the observations were made. As indicated in the last report, we want to know for each month the relative quantity of moisture abstracted from the human air passages in excess of that inhaled; we should therefore ascertain the relative quantity of vapor in each cubic foot of air inhaled in each month, or at least an average for each month, in order to compare the several months, or to subtract the absolute amount from the quantity which we suppose to have been exhaled, and which is believed to have been nearly a constant quantity under all temperatures. The average quantity of vapor inhaled per day is shown for each month of the year 1870 in the last column but one in Exhibits "I," "J," and "K."

Air at the temperature of 98° F., saturated with vapor of water, contains 18.69 grains. If we assume as an average eighteen expirations per minute, of twenty cubic inches of air each, there would be 11.68 troy ounces of vapor exhaled daily. For the purpose of giving a more complete idea of the different conditions in the different months, the last column has been added to each of the exhibits, "I," "J," and "K," showing the theoretical average daily excess of vapor exhaled in each month of the year 1870.

Taking the returns of deaths as they appear, and the meteorological conditions as we find them, there were just as many exceptions as there were cases in which the proposition held true that more than an average number of deaths from Croup occurred in months in which there was less than the average quantity of vapor inhaled; but, as pointed out on page 123, a greater proportion of the whole number of deaths which

occur are collected in months immediately preceding the time of collection. It will be noticed that the exceptional months in which there were returned a less than the average number of deaths from Croup, were January, February, March, and April; and it appears quite probable that the three or four deaths which are lacking to show a preponderance of evidence in favor of the proposition under discussion, may have been omitted in the collection. Another reason why the compiler does not yet give up hopes of showing a connection between humidity of the atmosphere and deaths from Croup, is the uncertainty as to the deaths being attributed to the true cause, for the reason that the statement of the cause of death comes in many cases from non-professional persons, and, worse than that, in many cases from pretenders to professional skill, who strive to magnify the importance of all cases under their care, and especially of all fatal cases. It is possible that some deaths from croup may have been returned as caused by Diphtheria. It will be seen by "Exhibit J" that if the deaths from these two causes be combined, the proposition before alluded to holds in a majority of cases, although there are then five exceptions.

There are other relations shown in "Exhibits I, J, and K," to exist between the deaths from Croup and Diphtheria and meteorological conditions, such as that in a majority of cases there were a less number of deaths in months in which the mean temperature was higher than the average; but this, so far as Croup is concerned, is simply a verification of ideas previously held by the profession and obtained by direct observation of physicians in practice. The compiler has devoted his labors more particularly to the examination into the reasons why a low temperature should be connected with deaths from Croup and Diphtheria, and for this purpose has used the best material at hand. Just such meteorological data for the year 1870 as was desired for study and publication in this connection has not been received from any meteorological observer in the

State, and for the reason that up to that time no demand was made upon them for such information as the relative amount of ozone or of carbonic acid in the air at different times in the year. It will at once be acknowledged, however, that if the best use is to be made of these statistics in the way of finding out the conditions existing at the time when the greatest proportion of deaths occur from the various specified causes, some provision should be made for securing a thorough system of meteorological observations in different parts of the State, under the direct supervision of those whose duty it is to make these statistics of practical use to the people, by pointing out the sources of danger to be avoided. Meanwhile, the thanks of the people will be due those observers throughout the State who shall benevolently contribute the results of their observations for use in connection with these statistics.

It may not be out of place here to suggest to all observers that such observations as those of the amount of carbonic acid in the air, in order to be of the greatest value in this connection, should be sufficiently extensive to include in the statement of results at least the amount present in such a quantity of air examined as would be inhaled by one person,—say 300 or 350 cubic feet, daily. The compiler is not aware of any such observations ever having been made in any country, but apparatus might be constructed which should continuously pass air through a test solution at a rate similar to that of human respiration; and some such observations are greatly needed in order to ascertain at different times of the year, and during the day and night, the different conditions of the air we breathe, upon the proper constitution of which our existence depends.

Before leaving this subject it may be well to indicate how it is possible for dry air, or cold air, to cause irritation and inflammation of the air-passages. Their lining membranes being normally moist, air more than usually dry receives and

is continually carrying vapor away from them at a rate faster than it is usually supplied, tending to make them dry, parched, irritated, and finally inflamed. It is also possible that an excessive abstraction of moisture from the blood may render it more likely to deposit at that place some of its constituents which under ordinary conditions remain in solution. Excessive exudation of fluid would be likely to be accompanied with an increased exudation of albumen, fibrin, white corpuscles, or such substance as usually goes to make up the mucus with which the air-passages are under ordinary circumstances continually bathed. These considerations will serve to show the sufficiency of the cause assigned to produce inflammation of the air passages, attended with exudation and deposition of lymph. This is the condition existing in Croup and in Diphtheritis, the distinction between the local conditions in the two diseases being mainly the different characters of the exudates.

The similarity of the two diseases renders it advisable to treat of them in close connection.

Diphtheria.—Rather more than the average number of females died from this disease. The order of mortality by months may be seen in "Exhibit K," as also certain meteorological conditions, apparently sustaining important relations to deaths from this disease.

Of the whole number of deaths, 57.85 per cent were of children under five years of age; and 25.61 per cent were between the ages of five and ten. Only two persons are reported as having died over thirty years of age; of these one was between the ages of sixty and seventy, and one between the ages of seventy and eighty.

For some conditions coincident with deaths from this disease, see "Exhibit K," and preceding remarks concerning Croup. It may be observed that the direct action of cold has not been dwelt upon in the remarks concerning the produc-

tion of inflammation of the air-passages. It should be kept in mind as a condition existing at the time the greatest proportion of the deaths from these diseases occur; but there seems to be no good reason for attributing their causation entirely to the direct action of cold alone.

EXHIBIT I.

Deaths in Michigan from Croup, by Months, during the Year 1870, and some Meteorological Conditions existing at the same time.

MONTHS IN ORDER, BY NUMBER OF DEATHS FROM CROUP.	Deaths.		Thermometer, Fahrenheit; Mean of Three Daily Observations—at 9 A. M., 2 P. M., and 9. P. M.			Humidity of Atmosphere, etc. Monthly Averages.					
			Range.								
	Number.	Per Cent of Total.	Daily.	From day to day, 2 P. M. to 2 P. M.	Temperature.	Rain-fall in inches.	Relative Humidity of Atmosphere; per cent of Saturation.	Force or Pressure of Vapor in inches.	Weight, in grains, of Vapor in cubic foot of Air. *a*	Weight, in Troy ounces, of Vapor inhaled by one person in 24 hrs. *b*	Weight, in Troy ounces, of Vapor exhaled from Air Passages in 24 hrs. in excess of Vapor inhaled. *c*
Year 1870	127	100.00	17.11°	19.03°	49.10°	37.757	81	.341	3.90	2.43	9.24
More than an average No. of Deaths. December	23	18.11	9.03°	10.58°	24.80°	2.570	94	.189	1.70	1.06	10.61
October	22	17.32	16.45	18.29	52.45	2.292	85	.346	3.95	*d* 2.46	9.21
November	20	15.74	19.96	21.36	38.40	.905	80	.187	2.22	1.38	10.29
September	18	10.28	22.96	25.03	63.66	2.846	88	.490	5.45	*d* 3.40	8.27

Less than an average No. of Deaths.	January	9	7.08	13.41	15.70	25.37	1.930	85	.125	1.50	*d* .93	10.74
	August	8	6.29	18.22	19.06	70.11	4.580	81	.594	6.54	4.08	7.59
	February	8	6.29	15.46	17.89	24.25	1.208	84	.112	1.35	*d* .84	10.88
	March	8	6.29	14.58	16.48	30.28	3.007	84	.148	1.76	*d* 1.10	10.58
	April	5	3.93	17.50	19.96	50.89	2.020	76	.267	3.06	*d* 1.91	9.76
	June	4	3.14	19.50	21.56	70.87	7.270	77	.588	6.45	4.03	7.65
	July	4	3.14	17.32	19.32	74.40	8.024	79	.659	7.19	4.49	7.18
	May	3	2 36	20.93	23.22	64.32	1.160	73	.441	4.92	3.07	8.60
Monthly Average		10.58	8.83	17.11 *	19.08 *	49.10 *	3.146	81	.341	3.90	2.43	9.24

a Approximate,—calculated from Force of Vapor and Temperature combined.

b Calculated for 18 respirations per minute, of 20 cubic inches of air each.

c Assuming the air exhaled to be saturated with vapor at the temperature of 98° F., each cubic foot containing 18.69 grains, 18 respirations pe minute of 20 cubic inches of air each, making 11.68 ounces Troy of vapor exhaled daily. No correction made for expansion of air after being inhaled

d Exceptions to proposition that more than an average number of deaths from Croup occurred in months in which there was less than the average quantity of vapor inhaled. It should be borne in mind that probably a less proportion of deaths were returned for months in early part of year.

The meteorological data for "Exhibits I, J, and K" was obtained from the Report of the State Board of Agriculture for the year 1870, and are results of observations by Prof. R. C. Kedzie, M. D., at the Agricultural College, near Lansing. The calculations of Range of Temperature, and Weights of Vapor, have been made in this Department.

EXHIBIT J.

Deaths in Michigan from Croup and Diphtheria, by Months, during the Year 1870, and some Meteorological Conditions existing at the Same Time.

Months in order by Number of Deaths from Croup and Diphtheria.		Deaths.		Thermometer—Fahrenheit. Mean of three Daily Observations, 9 A. M., 2 P. M., and 9. P. M.			Humidity of Atmosphere, etc. Monthly Averages.				
				Range.							
		Number.	Per Cent of Total.	Daily.	From Day to Day, 2 P. M. to 2 P. M.	Temperature.	Relative Humidity, or Per Cent of Saturation.	Force or Pressure of Vapor, in Inches.	Weight, in Grains, of Vapor in Cubic Foot of Air. *a*	Weight, in Ounces, Troy, of Vapor Inhaled by one person in 24 Hours. *a*	Weight, in Ounces, Troy, of Vapor Exhaled from Air Passages, in 24 Hours, in Excess of Vapor Inhaled. *a*
Year 1870		248	100.00	17.11°	19.08°	49.10°	81	.341	3.90	2.43	9.24
More than Av. No. of Deaths.	October	43	17.33	16.45°	18.29°	*b* 52.45°	85	.346	3.95	*c* 2.46	9.21
	December	41	16.53	9.08	10.58	24.80	94	.189	1.70	1.06	10.61
	November	32	12.90	19.96	21.36	38.40	90	.187	2.22	1.38	10.29
	September	22	8.87	22.96	25.08	*b* 63.66	83	.490	5.45	*c* 3.40	8.27
	January	21	8.46	13.41	15.70	25.37	85	.125	1.50	.93	10.74
Less than Average No. of Deaths.	March	20	8.06	14.58	16.48	*b* 30.23	84	.148	1.76	*c* 1.10	10.58
	August	17	6.85	18.22	19.06	70.11	81	.594	6.54	4.08	7.50
	February	16	6.45	15.46	17.89	*b* 24.25	84	.112	1.35	*c* .84	10.33
	May	10	4.03	20.93	23.22	64.32	78	.441	4.92	3.07	8.60
	June	10	4.03	19.50	21.56	70.37	77	.588	6.45	4.03	7.65
	July	10	4.03	17.32	19.32	74.40	79	.659	7.19	4.49	7.18
	April	6	2.41	17.50	19.96	50.39	76	.267	3.06	*c* 1.91	9.76
Monthly Average		20.66	8.33	17.11	19.08	49.10	81	.341	3.84	2.43	9.24

a See foot-notes to "Exhibit I," page 301.

b Exceptions to rule that more than an average number of deaths from Croup and Diphtheria occurred in months in which the mean temperature was less than the average.

c Exceptions to rule that more than an average number of deaths from Croup and Diphtheria occurred in months in which there was less than the average quantity of vapor inhaled.

EXHIBIT K.

Deaths in Michigan from Diphtheria, by Months, during the Year 1870, and some Meteorological Conditions existing at the Same Time.

Months in Order by Number of Deaths from Diphtheria.		Deaths.		Thermometer—Fahrenheit. Mean of three Daily Observations, 9 A. M., 2 P. M., and 9 P. M.			Humidity of Atmosphere, etc. Monthly Averages.				
				Range.							
		Number.	Per Cent of Total.	Daily.	From Day to Day, 2 P. M. to 2 P. M.	Temperature.	Relative Humidity, or Per Cent of Saturation.	Force or Pressure of Vapor, in Inches.	Weight, in Grains, of Vapor in Cubic Foot of Air. *a*	Weight in Ounces, Troy, of Vapor Inhaled by one Person in 24 Hours. *a*	Weight, in Ounces, Troy, of Vapor Exhaled from Air Passages in 24 Hours, in Excess of Vapor Inhaled. *a*
Year 1870		121	100.00	17.11°	19.03°	49.10°	81	.341	3.90	2.43	9.24
More than Av. No. of Deaths.	October	21	17.35	16.45°	18.29°	*b* 52.45°	85	.346	3.95	*c* 2.46	9.21
	December	18	14.87	9.03	10.58	24.80	94	.189	1.70	1.06	10.61
	November	12	9.91	19.96	21.36	38.40	80	.187	2.22	1.38	10.29
	January	12	9.91	12.41	15.70	25.37	85	.125	1.50	.98	10.74
	March	12	9.91	14.58	16.48	30.28	84	.148	1.76	1.10	10.58
Less than Average No. of Deaths.	August	9	7.43	18.22	19.06	70.11	81	.594	6.54	4.08	7.59
	September	9	7.43	22.96	25.03	63.66	83	.490	5.45	3.40	8.27
	February	8	6.61	15.46	17.89	*b* 24.25	84	.112	1.35	*c* .84	10.53
	May	7	5.78	20.93	23.22	64.32	73	.441	4.92	3.07	8.09
	June	6	4.95	19.50	21.56	70.87	77	.588	6.45	4.03	7.65
	July	6	4.95	17.32	19.32	74.40	79	.659	7.19	4.49	7.18
	April	1	.82	17.50	19.96	50.39	76	2.67	3.06	*c* 1.91	9.76
Average		10.08	8.33	17.11	19.08	49.10	81	.341	3.90	2.43	9.24

a See foot-notes to "Exhibit "I," page 301.
b Exceptions to rule that more than an average number of deaths from Diphtheria occurred in months in which the mean temperature was less than the average.
c Exceptions to rule that more than an average number of deaths from Diphtheria occurred in months in which there was less than the average quantity of vapor inhaled.

Diarrhea.—Slightly more than the average proportion of females died from this disease.

The deaths were in great part during the summer and autumn months; the order of mortality, beginning with the month having the greatest, being August, July, September, October, June, etc.

A very large proportion—87.83 per cent—of all the deaths were of children under five years of age. No deaths were returned of persons aged between ten and twenty.

The relative mortality in different parts of the State from this disease, and some other details, may be seen in Table XXI.; in which, however, the deaths from Chronic Diarrhea have been included, as was not the case in the similar table in last report.

TABLE XXI.

Exhibiting, for the State and for Eleven Geographical Divisions of the State, during the year 1870, the Number of Deaths from Diarrhea and from Dysentery; the Number of Persons living to One Death; and the Per Cent of Deaths from Each Disease to Deaths from All Causes.

STATE AND GEOGRAPHICAL DIVISIONS. *a*	DIARRHEA. ACUTE AND CHRONIC.			DYSENTERY. ACUTE AND CHRONIC.		
	Number of Deaths, 1870.	Persons Living to one Death. *b*	Per cent of Deaths from all Causes.	Number of Deaths, 1870.	Persons Living to one Death. *b*	Per Cent of Deaths from all Causes.
State	407	2,838	3.78	374	3,083	3.47
Upper Peninsula	4	5,741	1.10	6	3,827	1.65
Northwestern	16	1,120	9.24	15	1,195	8.67
Northern	10	584	13.51	6	890	8.10
Northeastern	.....	4,226	.....	1	4,226	3.12
Western	28	4,013	2.54	38	2,957	3.45
Northern Central	1	13,041	.68	12	1,086	8.21
Central	37	6,017	1.93	72	3,092	3.76
Bay and Eastern	64	2,326	5.17	57	2,612	4.61
Southwestern	24	4,850	2.36	49	2,890	4.82
Southern Central	40	6,867	1.70	89	3,086	3.78
Southeastern	183	1,169	7.73	29	7,380	1.22

a For counties included in each division, see page 217.
b Only the population represented by returns of deaths was considered.

Dysentery.—A greater proportion of males than of females died with this disease, the per cent of males being 52.81, which was very nearly the proportion from all causes.

The order of greatest mortality by months was August, September, July, October, etc. In the four months mentioned there were, respectively, 131, 114, 57, and 31 deaths, making 333, and leaving 40 to be distributed through the other months. There were no deaths in January, February, and March, only two in April, and four in May.

Of the 373 dying from this disease, 286, or 76.67 per cent, were of children under five years of age. The period of age throughout which the least number of deaths occurred was that of eighty and over, the number being one, or .26 per cent; the next period was that from fifteen to twenty, the number of deaths being two, or only .53 per cent of the whole number of deaths.

The total mortality from this disease, including one from Chronic Dysentery, and the per cent of deaths from all causes, in the State, and in each géographical division, is shown in Table XXI.

Measles.—From this disease more females died than males; the proportion of females being 53.57 per cent, while from all causes it was only 47.90 per cent. The greatest proportion of deaths were during the spring months, ten having occurred in March, ten in May, and eight in April. In each of the years 1868 and 1869 the greatest number was also returned as having occurred in March.

A very large proportion of the deaths were of children under ten, and 64.28 per cent of all were under five years of age. No deaths were returned of those aged ten to fifteen.

Scarlatina.—The number of deaths from this disease was very greatly increased over that for 1869, the number in that year being 252, while in 1870 there were returned 852, or nearly eight per cent of all deaths. The number of males dying of Scarlatina was somewhat greater than of females,

but the proportion of males was not quite up to the average from all causes, being 50.82 per cent. It appears from last report that the proportion of females was slightly greater than the average from all causes in 1869. The disease was most fatal in August, causing 93 deaths; and next, in September, causing 89 deaths; then in May and December, 82 deaths in each; the order then was March, April, June, February, November, July, October, and January. In the first report in this State the greatest number of deaths were returned for December; in the next report, next to the greatest number, and again in 1869 the greatest; but in 1870, although the deaths in this month were greatly increased, the numbers in August and September were increased still more, leaving December the third month in the order of greatest number of deaths.

In view of the great mortality from this disease and the immense amount of injury to young persons,—the results of which extend throughout their after lives,—it is greatly to be regretted that some of the alarm and dread which is now associated with Small-pox is not transferred to Scarlatina, compared with which Small-pox is now a harmless, or, at least, a preventable disease,—thanks to the labors of Jenner, who brought vaccination to light, deaths from Small-pox being now unnecessary, and, among intelligent people, properly attributable to carelessness in not employing this known method of prevention. The whole number of deaths from small-pox in 1869 was forty-two, and in 1870 only nine. If Scarlatina was as thoroughly feared as is Small-pox, many deaths from it might be prevented.

Typhoid Fever.—The number of deaths from Typhoid Fever was 574,—a little over five per cent of the deaths from all causes. The proportion of deaths of females was much greater than of males, being 52.96 per cent,—the average from all causes being 47.90.

The greatest number of deaths in any one month was 117,

in October. The order of mortality by months was then: September, 106; November, 94; August, 64; December, 52; July, 34; March, 33; February, May, and June, 17 each; January, 10. In 1869 the greatest number of deaths was also in October; the least number was in June.

The period of age throughout which the greatest number died was that from twenty to thirty; the next greatest number died at ages between fifteen and twenty, then under five years of age; but no period of age was entirely exempt, although there was only one death of a person aged eighty or over.

Whooping Cough.—One hundred and nineteen deaths were reported as resulting from this cause. The difference in the proportion of the sexes was 7.57 per cent more females than males. The greatest number in one month was twenty, in May; the least number was one, in December. All the deaths from this cause were of children under five years of age, except five, four of which died at ages between five and ten, and one was reported to have been between sixty and seventy years of age.

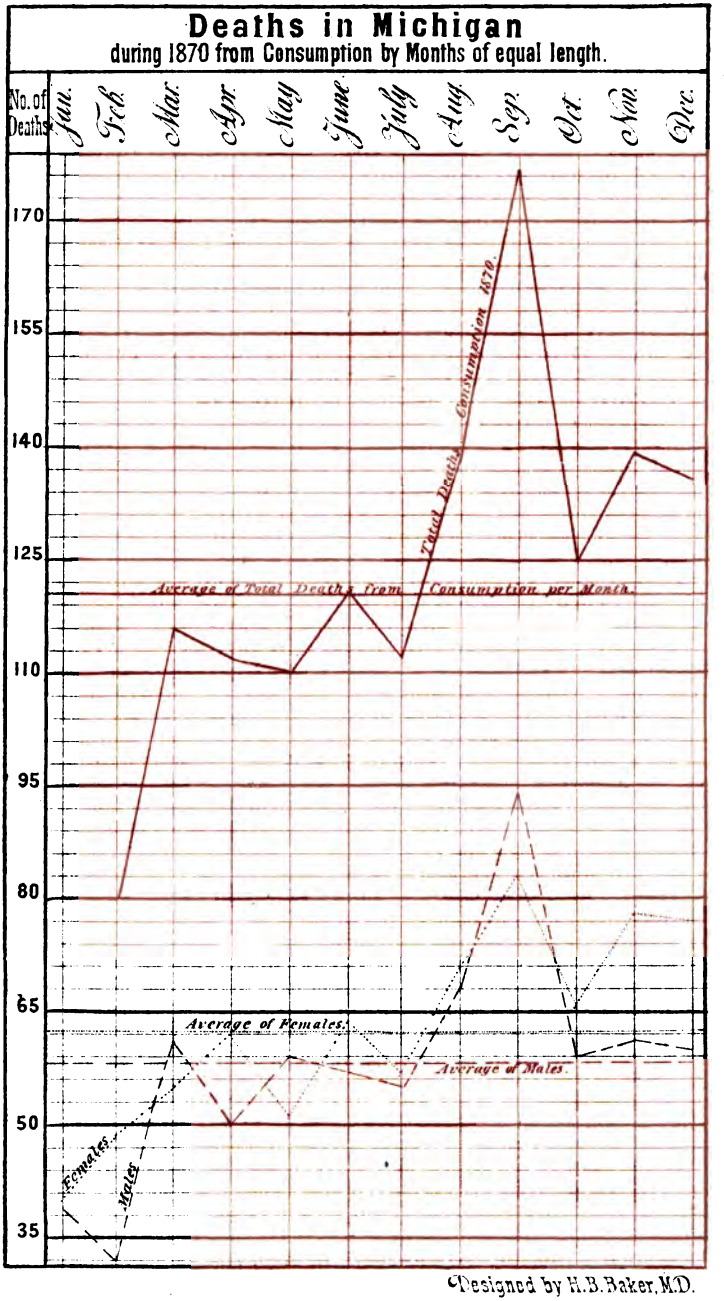
Casualties, etc.—It would seem that some useful ideas concerning dangers to be avoided may be gained from a consideration of the various accidental or violent deaths specified in the returns. The following are some of them, quoted from the several returns: "Accidental murder,—burned with naptha lamp;" "Buried in well;" "Burned to death with kerosene," three; "Burned to death by an explosion," six; "By falling down stairs;" "By rope coiling around leg on boat;" "Caving in of sand-bank;" "Dislocation of neck;" "Drowned in wash-tub," child one year old; "Explosion of steam boiler," two; "Fall of a tree;" "Hurted by an insect;" "Killed in a drunken brawl;" "Killed in affray," two; "Killed by a cow;" "Killed by a horse," two; "Kick of a horse;" "Killed by fall of lumber pile;" "Overdose of arsenic, given by physician for intermittent fever;" "Overdose of

opium;" "Overdose of chloroform;" "Poisoned by eating wild parsneps;" "Shot by a burglar;" "Poisoned by eating a worm;" "Shot himself," two,—whether accidental or suicidal was not stated; "Stroke of ox-horn;" "Struck by falling timber;" "Thrown from carriage," four; "Wounded by a dog;" "Well caved in on him."

Consumption.—The whole number of deaths returned as having occurred from this disease during the year 1870 was 1,451, an increase of 218 over the number returned for 1869, which was 1,233. This would be an increase of 17.68 per cent, which is not quite as great as the increase of deaths from all causes, by .04 per cent. This is also shown by the per cent of deaths from Consumption to deaths from all causes, which for the year 1869 was 13.48, and in 1870 13.47 per cent. This furnishes no positive knowledge as to whether the death-rate from this disease is becoming greater or less in this State, and these statistics have not yet been collected for a sufficient length of time to answer the question; but it is known that in Massachusetts the mortality from Consumption has been, for the past sixteen years up to 1869, slowly but surely decreasing.

Excluding one of unknown sex, and three others in unknown month, "Exhibit L" shows the number in each month equalized to uniform length of 30.44 days each; and the same is graphically represented in Diagram No. 7.

DIAGRAM No 7.



Designed by H.B. Baker, M.D.

EXHIBIT L.

By Sex, the Number of Deaths in Michigan from Consumption during the Year 1870, by Months Equalized to Uniform Length of 30.44 Days each; and also the Average Numbers Per Month (Deaths of Unknown Sex, and in Unknown Months, Excluded.)

	Year.	Months of Equal Length.												
		January.	February.	March.	April.	May.	June.	July.	August.	Septemb'r.	October.	November.	December.	Average.
Totals	1447	80	80	116	112	110	121	112	189	177	125	139	136	120.54
Males	695	39	32	61	50	59	57	55	68	94	59	61	60	57.91
Females	752	40	49	55	62	51	63	57	71	83	66	78	77	62.66

Pneumonia.—Before concluding the examination of the causes of death from Consumption, it seems advisable to take up the subject of Pneumonia, and then continue the study of both together.

Notwithstanding there was an increased number of deaths returned from Consumption and from all causes combined, the whole number of deaths returned as having occurred during the year 1870 from Pneumonia was 376, which was 151 less than for 1869. The relation of deaths from Pneumonia to deaths from all causes, was, in 1869, 4.66 per cent; in 1870 it was 3.49 per cent.

In last report it was shown that there was a correlation between Consumption and Pneumonia,—that under circumstances and conditions where there was more than the average mortality from one disease, there was likely to be less than the average from the other. The subject will be still further examined in this report, beginning with Table XXII.

TABLE XXII.

Correlation of Consumption and Pneumonia. Deaths from Consumption and Pneumonia in Michigan during the Year 1870, by Months, Exhibiting the Total Number, Number of Each Sex, Per Cent of Total, and Excess of each Sex.

MONTHS.	CONSUMPTION.									PNEUMONIA.							
	Number.				Per Cent of Deaths in Each Month to Total for Year. *a*	Per Cent of Each Sex to Total of Both Sexes.				Number.			Per Cent of Deaths in Each Month to Total for Year. *a*	Per Cent of Each Sex to Total of Both Sexes.			
	Males.	Females.	Unknown.	Total.		Males.	Females.	Excess. Males.	Excess. Females.	Males.	Females.	Total.		Males.	Females.	Excess. Males.	Excess. Females.
Year 1870	697	753	1	1,451	.....	48.08	51.96	.....	3.87	219	157	376	.....	58.24	41.75	16.49	.....
January	40	41	.....	81	5.59	49.38	50.61	*h*	1.23	14	8	22	5.86	63.63	36.36	27.27	*h*
February	*d* 29	*f* 45	.....	74	*b* 5.11	39.18	60.81	*h*	21.63	*d* 30	*f* 16	46	*b* 12.26	65.21	34.78	30.43	*h*
March	62	*f* 56	.....	118	*b* 8.15	52.54	47.45	5.09	.....	27	*f* 16	43	*b* 11.46	62.79	37.20	25.59	.....
April	49	61	.....	110	7.60	44.54	55.45	.....	10.91	12	12	24	6.40	50.00	50.00	.....	.....
May	*e* 60	52	.....	112	7.74	53 57	46 42	7.15	.....	*e* 14	10	24	6.40	58.33	41.66	16.67	.....
June	56	62	.....	118	8.15	47.45	52.54	*h*	5.09	14	13	27	7.20	51.85	48.14	3.71	*h*

July	56	58	.....	114	7.87	49.12	50.87	.....	1.75	7	10	17	4.53	41.17	58.82	.....	17.65
August	*e* 69	*g* 73	.....	142	*c* 9.81	48.59	51.40	*h*	2.81	*e* 12	*g* 11	23	*c* 6.13	52.17	47.82	4.35	*h*
September	*e* 93	*g* 82	.....	175	*c* 12.09	53.14	46.85	6.29	*h*	*e* 9	*g* 11	20	*c* 5.33	45.00	55.00	*h*	10.00
October	*e* 60	67	.....	127	*c* 8.77	47.24	52.75	.....	5.51	*e* 13	14	27	*c* 7.20	48.14	51.85	.....	3.71
November	60	77	.....	137	9.46	43.79	56.20	*h*	12.41	27	14	41	10.93	65.85	34.14	31.71	*h*
December	61	78	.....	139	9.60	43.88	56.11	*h*	12.23	39	22	61	16.26	63.93	36.06	27.87	*h*
Unknown	2	1	1	4	.....	66.66	33.33	33.33	.....	1	.....	1	.....	100.00	.....	100.00	.....
Average *a*	57.91	62.66	.....	120.57	8.33	48.03	51.96	.....	3.93	18.16	13.08	31.24	8.33	58.13	41.86	16.27	.....

a Unknown month excluded.

b Months in which there was less than the average proportion of deaths from Consumption, and more than the average from Pneumonia.

c Months in which there was more than the average proportion of deaths from Consumption, and less than the average from Pneumonia.

d Months in which there were less than the average number of deaths of males from Consumption, and more than the average number of deaths of males from Pneumonia.

e Months in which there were more than the average number of deaths of males from Consumption, and less than the average from Pneumonia.

f Months in which there were less than the average number of deaths of females from Consumption, and more than the average from Pneumonia.

g Months in which there were more than the average number of deaths of females from Consumption, and less than the average from Pneumonia.

h Seven out of eleven months in which there was an excess of deaths of one sex from Consumption, and of the opposite sex from Pneumonia. In April there was an excess of deaths of females from Consumption, and an equal number of each sex from Pneumonia.

EXHIBIT M.

Deaths from Consumption in Michigan during the Year 1870, and some Meteorological Conditions existing at the Same Time.

Months in order by Number of Deaths from Consumption.		Deaths.		Thermometer—F. Mean of 3 Daily Observations, 9 A. M., 2 P. M., and 9. P. M.			Humidity of Atmosphere, etc. Monthly Averages.				
				Range.							
		Number.	Per Cent of Total.	Daily.	From Day to Day, 2 P. M. to 2 P. M.	Temperature.	Relative Humidity, or Per Cent of Saturation.	Force or Pressure of Vapor, in Inches.	Weight, in Grains, of Vapor in Cubic Foot of Air. *a*	Weight, in Ounces, Troy, of Vapor Inhaled by one person in 24 Hours. *a*	Weight, in Ounces, Troy, of Vapor Exhaled from Air Passages, in 24 Hours, in Excess of Vapor Inhaled. *a*
Year 1870		1,447	100.00	17.11°	19.08°	49.10°	81	.341	3.90	2.43	9.24
More than Av. No. of Deaths.	September	175	12.09	22.96°	25.03°	63.66°	83	.490	5.45	3.40	8.27
	August	142	9.81	18.22	19.06	70.11	81	.594	6.54	4.08	7.59
	December	139	9.60	9.03	10.58	24.80	94	.139	1.70	*b* 1.06	10.61
	November	137	9.46	19.96	21.36	38.40	80	.187	2.22	*b* 1.38	10.29
	October	127	8.77	16.45	18.29	52.45	85	.346	3.95	2.46	9.21
Less than Average No. of Deaths.	June	118	8.15	19.50	21.56	70.87	77	.588	6.45	*b* 4.03	7.65
	March	118	8.15	14.58	16.48	20.28	84	.148	1.76	1.10	10.58
	July	114	7.87	17.32	19.32	74.40	79	.659	7.19	*b* 4.49	7.18
	May	112	7.74	20.93	23.22	64.32	73	.441	4.92	*b* 3.07	8.60
	April	110	7.60	17.50	19.96	50.39	76	.267	3.06	1.91	9.76
	January	81	5.59	13.41	15.70	25.37	85	.125	1.50	.93	10.74
	February	74	5.11	15.46	17.89	24.25	84	.112	1.35	.84	10.83
Average Month		120.58	8.33	17.11	19.08	49.10	81	.341	3.84	2.43	9.24

a See foot-notes to "Exhibit I," page 301.

b Exceptions to rule that more than an average amount of vapor was inhaled in months in which there were more than an average number of deaths from Consumption, and less than the average amount in months in which less than the average number of deaths occurred.

EXHIBIT N.

Deaths from Pneumonia, in Michigan, during the Year 1870, and some Meteorological Conditions existing at the Same Time.

Months in Order by Number of Deaths from Pneumonia.		Deaths.		Thermometer—F. Mean of 3 Daily Observations, 9 A. M., 2 P. M., and 9 P. M.			Humidity of Atmosphere, etc. Monthly Averages.				
				Range.							
		Number.	Per Cent of Total.	Daily.	From Day to Day, 2 P. M. to 2 P. M.	Temperature.	Relative Humidity, or Per Cent of Saturation.	Force or Pressure of Vapor, in Inches.	Weight, in Grains, of Vapor in Cubic Foot of Air. *a*	Weight, in Ounces, Troy, of Vapor Inhaled by one Person in 24 Hours. *a*	Weight, in Ounces, Troy, of Vapor Exhaled from Air Passages in 24 Hours, in Excess of Vapor Inhaled. *a*
Year 1870		375	100.00	17.11°	19.03°	49.10°	81	.341	3.90	2.43	9.24
More than av. No. of Deaths.	December	61	16.26	9.03°	10.58°	24.80°	94	.189	1.70	1.06	10.61
	February	46	12.26	15.46	17.89	24.25	84	.112	1.35	.84	10.68
	March	43	11.46	14.58	16.48	30.28	84	.148	1.76	1.10	10.56
	November	41	10.93	19.96	21.36	38.40	80	.187	2.22	1.38	10.20
Less than average No. of Deaths.	October	27	7.20	16.45	18.29	52.45	85	.346	3.95	2.46	9.21
	June	27	7.20	19.50	21.56	70.87	77	.588	6.45	4.03	7.65
	May	24	6.40	20.93	23.22	64.32	73	.441	4.92	3.07	8.60
	April	24	6.40	17.50	19.96	50.39	76	.267	3.06	*c* 1.91	9.76
	August	23	6.13	18.22	19.06	70.11	81	.594	6.54	4.08	7.59
	January	22	5.86	13.41	15.70	*b* 25.37	85	.125	1.50	*c* .93	10.74
	September	20	5.33	22.96	25.03	63.66	83	.490	5.45	3.40	8.27
	July	17	4.53	17.32	19.32	74.40	79	.659	7.19	4.49	7.13
Average Month		31.25	8.33	17.11	19.03	49.10	81	.341	3.84	2.43	9.24

a See foot-notes to "Exhibit "I," page 301.

b Exceptions to rule that the temperature was greater than the average in months in which less than the average number of deaths from Pneumonia occurred. The temperature was less than the average in every month in which there were more than the average number of deaths.

c Exceptions to rule that more than the average amount of vapor for the year was inhaled in months in which there were less than the average number of deaths from Pneumonia. There were no exceptions to the rule that less than the average amount of vapor was inhaled in months in which more than the average number of deaths occurred from this disease.

TABLE XXIII.

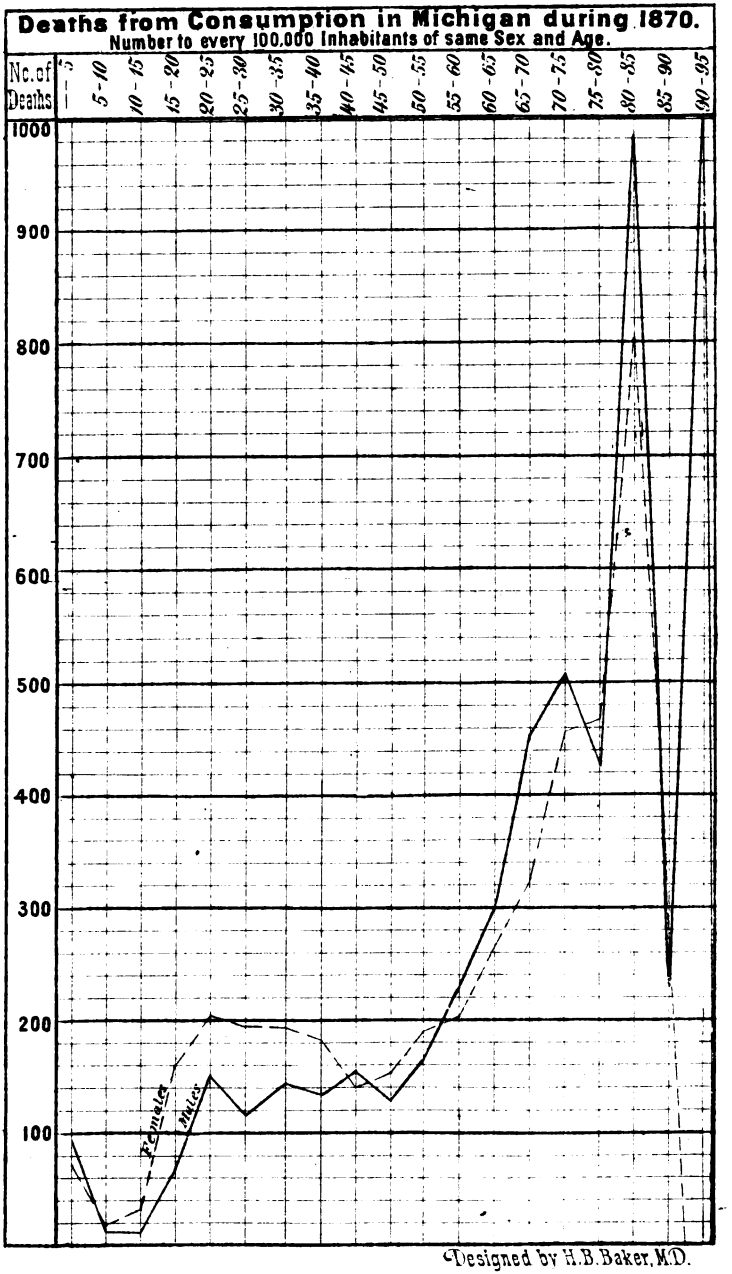
Exhibiting, by Sex, the Death-Rate and the Number of Deaths, at Each Period of Age, from Consumption, in Michigan during the Year 1870.

AGES.	Per Cent of Deaths to Population of Corresponding Age and Sex. a					Number of Deaths.			
				Excess.					
	Total.	Males.	Females.	Males.	Females.	Total.	Males.	Females.	Unknown.
All Ages	.125	.116	.136	....	.020	1,451	697	753	1
Under 1	.243	.292	.193	.099	....	77	47	30	....
1 to 2	.118	.127	.099	.028	....	35	20	15	....
2 to 3	.030	.029	.037	....	.008	10	5	5	....
3 to 4	.021	.030	.012	.018	....	7	5	2	....
4 to 5	.019	.012	.026	....	.014	6	2	4	....
Under 5	.085	.097	.071	....	....	135	79	56	....
5 to 10	.014	.012	.017	....	.005	21	9	12	....
10 to 15	.020	.011	.029	....	.018	28	8	20	....
15 to 20	.113	.068	.159	....	.091	132	40	92	....
20 to 25	.178	.153	.205	....	.052	200	89	111	....
25 to 30	.153	.117	.192	....	.075	151	60	91	....
30 to 35	.167	.141	.192	....	.051	135	59	75	1
35 to 40	.172	.136	.184	....	.048	116	53	63	....
40 to 45	.145	.153	.137	.016	....	87	49	38	....
45 to 50	.139	.130	.151	....	.021	69	36	33	....
50 to 55	.175	.164	.190	....	.026	73	39	34	....
55 to 60	.217	.228	.201	.027	....	62	37	25	....
60 to 65	.283	.295	.267	.028	....	66	38	28	....
65 to 70	.394	.450	.323	.127	....	58	37	21	....
70 to 75	.483	.504	.456	.048	....	46	27	19	....
75 to 80	.448	.430	.469	....	.039	21	11	10	....
80 to 85	.397	.383	.300	.183	....	19	11	8	....
85 to 90	.253	.230	.280	....	.050	2	1	1	....
90 to 95	.520	1.000	....	1.000	....	1	1	....	....
95 to 100	....	....	....	....	....	.....	....	....	....
100 and over	....	....	....	....	....	.....	....	....	....
Unknown Ages	....	....	....	....	....	29	13	16	....

a Population only that of counties and townships represented by returns of deaths.

Disregarding the decimal points, the numbers in the third and fourth columns of Table XXIII. represent the number of

DIAGRAM Nº 9.



Designed by H.B.Baker, M.D.

deaths in every 100,000 inhabitants of each sex, at the several periods of age; and the same, beginning with all under five, is graphically represented in Diagram No. 9.

Table IV., page 129, and Diagram No. 8, facing it, exhibit similar statements concerning deaths from all causes. The two tables may be compared with each other; but the facts are more forcibly shown by the diagrams, and their comparison is more satisfactory, as they appeal to the sense of sight, and not to the imagination alone, as do the figures of the tables.

It will, doubtless, be a matter of surprise to many physicians to find the death-rate from Consumption after the age of fifty years, greater than the average, and increasing with the age; but so it appears from the returns. Although the number of deaths is greatest at the ages between twenty and twenty-five, the proportion of deaths of the whole number of inhabitants of the same age appears to be greatest in old age.

The per cent of total deaths from all causes to population was precisely the same for both sexes, being .930 per cent. The per cent of total deaths from Consumption to population was: males, .116; females, .136,—a difference of .020 per cent.

Out of 100 deaths from all causes, except Consumption and Pneumonia, there were 4.97 more males than females.

Out of 100 deaths from Consumption there were 3.87 more females than males.

Out of 100 deaths from Pneumonia there were 16.49 more males than females.

Making a difference between the proportion of deaths of the sexes from the two causes of 20.36 per cent. The excess per cent from Consumption being 8.84 more females, and the excess per cent from Pneumonia 11.52 more males than from all causes except these two.

This furnishes a marked illustration of the correlation of Consumption and Pneumonia, so far as concerns the sex of decedents. The relation between the two diseases at the different periods of age is shown in Table XXIV.

TABLE XXIV.

Correlation of Consumption and Pneumonia.—Exhibiting the Number and Per Cent of Deaths of Each Sex, the Difference between the Sexes, and the Per Cent of Total Deaths at Each Period of Age, from Consumption and Pneumonia in Michigan during the Year 1870.

Age.	Consumption.									Pneumonia.							
	Number.				Per Cent of Deaths at Each Age to Deaths at All Ages. *a*	Percentage of the Sexes. (Unknown Sex Excluded.)				Number.			Per Cent of Deaths at Each Age to Deaths at All Ages. *a*	Percentage of the Sexes.			
								Excess.								Excess.	
	Males.	Females.	Unknown.	Total.		Males.	Females.	Males.	Females.	Males.	Females.	Total.		Males.	Females.	Males.	Females.
All Ages	697	753	1	1,451	.....	48.06	51.93	.....	3.87	219	157	376	.....	58.24	41.75	16.49	.....
Under 5	79	56	.....	135	9.49	58.51	41.48	17.03	.....	96	88	184	49.19	52.17	47.82	4.35	.....
5 to 10	9	12	.....	21	1.47	42.85	57.14	.....	14.29	7	7	14	3.74	50.00	50.00	.....	.....
10 to 15	8	20	.....	28	1.96	28.57	71.42	.....	42.85	2	2	4	1.06	50.00	50.00	.....	.....
15 to 20	*b* 40	*b* 92	.....	*b* 132	*b* 9.28	30.30	69.69	.....	39.39	*b* 6	*b* 7	*b* 13	*b* 3.47	46.15	53.84	.....	7.69
20 to 30	*b* 149	*b* 202	.....	*b* 351	*b* 24.68	42.45	57.54	.....	15.09	*b* 10	*b* 12	*b* 22	*b* 5.88	45.45	54.54	.....	9.09
30 to 40	*b* 112	*b* 138	1	*b* 251	*b* 17.65	44.80	55.20	.....	10.40	*b* 5	*b* 7	*b* 12	*b* 3.20	41.66	58.33	.....	16.67
40 to 50	*b* 85	71	.....	156	10.97	54.48	45.51	8.97	.....	*b* 15	10	25	6.68	60.00	40.00	20.00	.....

50 to 60	76	59	.....	135	9.49	56.29	43.70	12.59	.....	27	7	34	9.09	79.41	20.58	58.83	.....
60 to 70	*d* 75	49	.....	124	8.72	60.48	39.51	20.97	.....	*d* 27	8	35	9.35	77.14	22.85	54.29	.....
70 to 80	38	29	.....	67	4.71	56.71	43.28	13.43	.....	20	9	29	7.75	68.96	31.03	37.93	.....
80 and over	13	9	.....	22	1.54	59.09	40.90	18.19	.....	2	.....	2	.53	100.00	.....	100.00	.....
Unknown	13	16	.....	29	1.99	44.82	55.17	.....	10.35	2	.....	2	.....	100.00	.....	100.00	.....
Average *c*	38	40.94	.....	78.94	5.55	48.13	51.86	.....	8.78	12.05	8.72	20.77	5.55	58.01	41.98	16.03	.....

a Unknown ages excluded.

b More than an average number and per cent of deaths from Consumption, and less than an average number and per cent of deaths from Pneumonia.

c Of 18 periods of 5 years each; unknown ages excluded.

d Less than an average number of deaths of males from Consumption, and more than an average number of deaths of males from Pneumonia.

TABLE XXV.

Exhibiting, for the State and Eleven Geographical Divisions, in 1870, by Sex, the Population, the Number of Deaths, the Death-rate, and Number of Persons Living to one Death; for Deaths from all Causes, from Consumption, Pneumonia, and Typhoid Fever; also, the Per Cent of Deaths from Consumption, Pneumonia, and Typhoid Fever, to Deaths from All Causes.

State and Geographical Divisions. a	Sex.	Population, June 1st, 1870.	All Causes.			Consumption.				Pneumonia.				Typhoid Fever.			
			No. of Deaths.	Per Cent to Population.	Persons Living to one Death.	No. of Deaths.	Per Cent to Population.	Persons Living to one Death.	Per Cent to Deaths from all Causes.	No. of Deaths.	Per Cent to Population.	Persons Living to one Death.	Per Cent to Deaths from all Causes.	No. of Deaths.	Per Cent to Population.	Persons Living to one Death.	Per Cent to Deaths from all Causes.
State b	Total	1,153,368	10,766	.933	107	1,451	.125	794	13.47	376	.032	3,067	3.49	574	.049	2,009	5.33
	Males	600,806	5,589	.930	107	697	.116	861	12.47	219	.036	2,743	3.91	270	.044	2.225	4.83
	Females	552,562	5,140	.930	107	753	.136	733	14.64	157	.028	3,519	3.05	304	.055	1,817	5.91
	Unknown	.....	37	.....	....	1	.....	.....	2.70	.....	.....	.....	....	.....	.....	.....	.....
Upper Peninsula c	Total	22,964	362	1.576	63	24	.104	956	6.62	5	.021	4,592	1.38	17	.074	1,350	4.69
	Males	13,467	180	1.336	74	7	.051	1,923	3.88	3	.022	4,489	1.66	6	.044	2,244	3.33
	Females	9,497	180	1.895	52	17	.179	558	9.44	2	.021	4,748	1.11	11	.115	863	6.11
	Unknown	.....	2	.....	....	.....	.....	.....	....	.....	.....	.....	....	.....	.....	.....	.....

Northwestern *d*	Total	17,928	173	.964	103	20	.111	896	11.56	8	.016	5,976	1.73	5	.027	3,585	2.89
	Males	9,760	100	1.024	97	11	.112	887	11.00	3	.030	3,253	3.00	2	.020	4,880	2.00
	Females	8,168	73	.893	111	9	.110	907	12.32	-----	-----	-----	----	3	.036	2,722	4.10
Northern *e*	Total	5,344	74	1.384	72	8	.149	668	10.81	-----	-----	-----	----	1	.018	5,344	1.35
	Males	2,932	45	1.534	65	3	.102	977	6.66	-----	-----	-----	----	-----	-----	-----	-----
	Females	2,412	29	1.202	83	5	.207	482	17.24	-----	-----	-----	----	1	.041	2,412	3.44
Northeastern *f*	Total	4,226	32	.757	132	5	.118	845	15.62	3	.070	1,408	9.37	1	.023	4,226	3.12
	Males	2,535	15	.591	169	2	.078	1,267	13.33	-----	-----	-----	----	-----	-----	-----	-----
	Females	1,691	17	1.005	99	3	.177	563	17.64	3	.177	563	17.64	1	.059	1,691	5.88
Western	Total	112,384	1,101	.979	102	147	.130	764	13.35	35	.031	3,210	3.17	54	.048	2,081	4.90
	Males	59,762	578	.967	103	72	.120	830	12.45	26	.043	2,298	4.49	25	.041	2,390	4.32
	Females	52,622	518	.984	101	75	.142	701	14.47	9	.017	5,846	1.73	29	.055	1,814	5.59
	Unknown	.....	5	-----	----	-----	-----	-----	----	-----	-----	-----	----	-----	-----	-----	-----
Northern Central *g*	Total	13,041	146	1.119	89	17	.130	767	11.64	4	.030	3,260	2.73	16	1.22	815	10.95
	Males	7,085	70	.988	101	6	.084	1,180	8.57	4	.056	1,771	5.11	6	.084	1,180	8.57
	Females	5,956	76	1.276	78	11	.184	541	14.47	-----	-----	-----	----	10	.167	595	13.15

a For counties included in each Division see page 217.
b Except counties and townships from which no returns of Deaths were received; see page 217.
c Except counties of Keweenaw, Houghton, and Mackinac, and townships of Delton and Masonville in county of Delta.
d Except counties of Manitou and Missaukee.
e Except county of Cheboygan.
f Except county of Alpena.
g Except county of Clare.

TABLE XXV.—CONTINUED.

Geographical Divisions.	Sex.	Population, June 1st, 1870.	All Causes.			Consumption.				Pneumonia.				Typhoid Fever.			
			No. of Deaths.	Per Cent to Population.	Persons Living to one Death.	No. of Deaths.	Per Cent to Population.	Persons Living to one Death.	Per Cent to Deaths from all Causes.	No. of Deaths.	Per Cent to Population.	Persons Living to one Death.	Per Cent to Deaths from all Causes.	No. of Deaths.	Per Cent to Population.	Persons Living to one Death.	Per Cent to Deaths from all Causes.
Central	Total	222,658	1,918	.859	116	270	.121	824	14.11	81	.036	2,748	4.23	124	.055	1,795	6.48
	Males	115,765	956	.825	121	127	.109	911	13.28	43	.037	2,692	4.49	59	.050	1,962	6.17
	Females	106,893	945	.884	113	143	.133	747	15.13	38	.035	2,812	4.02	65	.060	1,644	6.87
	Unknown	.....	12	.....	....	.....	.....	.....	....	.....	.....	.....	....	.....	.....	.....	.....
Bay and Eastern Shore a	Total	148,920	1,236	.829	120	147	.098	1,018	11.89	64	.042	2,326	5.17	55	.036	2,707	4.44
	Males	79,287	641	.808	123	80	.100	991	12.48	23	.029	3,447	3.58	27	.034	2,936	4.21
	Females	69,633	594	.853	117	67	.096	1,039	11.27	41	.059	1,698	6.90	28	.040	2,436	4.71
	Unknown	.....	1	.....	....	.....	.....	.....	....	.....	.....	.....	....	.....	.....	.....	.....
Southwestern	Total	117,140	1,015	.866	115	150	.128	780	14.77	50	.042	2,342	4.92	62	.052	1,889	6.10
	Males	60,908	529	.868	115	63	.103	966	11.90	34	.055	1,791	6.42	29	.047	2,100	5.48
	Females	56,232	484	.860	116	87	.154	647	17.97	16	.028	3,514	3.30	33	.058	1,704	6.81
	Unknown	.....	2	.....	....	.....	.....	.....	....	.....	.....	.....	....	.....	.....	.....	.....

South Central *b*	Total	274,715	2,349	.855	116	331	.120	820	14.09	76	.027	3,614	3.23	158	.055	1,795		
	Males	140,705	1,222	.868	115	137	.097	1,027	11.21	47	.033	2,993	3.84	76	.054	1,851	6.21	
	Females	134,010	1,120	.835	119	193	.144	694	17.23	29	.021	4,621	2.58	77	.057	1,740	.687	
	Unknown	.....	7	.....	.....	1	.....	.....	14.28	.....	.....	.....	.....	.....	.....	.....	.....	
Southeastern *c*	Total	214,048	2,365	1.104	90	332	.155	644	14.03	55	.025	3,890	2.32	86	.040	2,488	3.68	
	Males	108,600	1,253	1.153	86	189	.174	574	15.08	36	.033	3,016	2.87	40	.030	2,715	3.11	
	Females	105,448	1,104	1.046	95	143	.135	737	12.95	19	.018	5,549	1.72	46	.043	2,292	4.16	
	Unknown	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

a Except township of Chesaning, in county of Saginaw.
b Except township of Ida, in county of Monroe.
c Except township of Battle Creek, in county of Calhoun.

EXHIBIT O.

The Eleven Geographical Divisions of the State, arranged in Order of Mortality from All Causes, and from Typhoid Fever; those having the Greatest, First.

FROM ALL CAUSES.			FROM TYPHOID FEVER.		
Order.	State and Geographical Divisions.	Per Cent of Deaths to Population.	Order.	State and Geographical Divisions.	Per Cent of Deaths to Population.
	State	.933		State	.049
1	Upper Peninsula	1.576	1	Northern Central	.122
2	Northern *a*	1.384	2	Upper Peninsula	.074
3	Northern Central *a*	1.119	3	Central	.055
4	Southeastern *a*	1.104	4	Southern Central	.055
5	Western *a*	.979	5	Southwestern	.052
6	Northwestern	.964		AVERAGE.	
	AVERAGE.		6	Western	.048
7	Southwestern *a b*	.866	7	Southeastern	.040
8	Central *b*	.859	8	Bay and Eastern Shore	.036
9	Southern Central	.855	9	Northwestern	.027
10	Bay and Eastern Shore *b*	.829	10	Northeastern	.023
11	Northeastern *b*	.757	11	Northern	.018

a Divisions having more than the average mortality from Consumption; see "Exhibit P."

b Divisions having more than the average mortality from Pneumonia.

EXHIBIT P.

Correlation of Consumption and Pneumonia.—The Eleven Geographical Divisions of the State arranged in Order of Mortality from Consumption and Pneumonia; those having the Greatest, First.

FROM CONSUMPTION.			FROM PNEUMONIA.		
Order.	State and Geographical Divisions.	Per Cent of Deaths to Population.	Order.	State and Geographical Divisions.	Per Cent of Deaths to Population.
	State	.125		State	.082
1	Southeastern *a*	.155	1	Northeastern *b*	.070
2	Northern *a*	.149	2	Bay and Eastern Shore *b*	.042
3	Western *a*	.130	3	Southwestern	.042
4	Northern Central *a*	.130	4	Central *b*	.036
5	Southwestern	.128		AVERAGE.	
	AVERAGE.		5	Western *a*	.031
6	Central *b*	.121	6	Northern Central *a*	.030
7	Southern Central	.120	7	Southern Central	.027
8	Northeastern *b*	.118	8	Southeastern *a*	.025
9	Northwestern	.111	9	Upper Peninsula	.021
10	Upper Peninsula	.104	10	Northwestern	.016
11	Bay and Eastern Shore *b*	.098	11	Northern *a*	.000

a Four, out of five, divisions having more than the average mortality from Consumption, and less than the average from Pneumonia. They had more than the average mortality from all causes; see "Exhibit O."

b Three, out of four, divisions having more than the average mortality from Pneumonia, and less than the average mortality from Consumption. All the four divisions had less than the average mortality from all causes; see "Exhibit O."

TABLE XXVI.

Exhibiting, for the State and Counties, the Population, Number of Deaths, Per Cent to Population, and Persons Living to one Death, for Deaths from All Causes, from Consumption, Pneumonia, and Typhoid Fever; and Per Cent of Deaths from the Causes Specified, to Deaths from All Causes, for the Year 1870.

STATE AND COUNTIES.	Population June 1st, 1870.	All Causes.			Consumption.				Pneumonia.				Typhoid Fever.			
		Number of Deaths.	Per Cent to Population.	Persons Living to One Death.	Number of Deaths.	Per Cent to Population.	Persons Living to One Death.	Per Cent to Deaths from All Causes.	Number of Deaths.	Per Cent to Population.	Persons Living to One Death.	Per Cent to Deaths from All Causes.	Number of Deaths.	Per Cent to Population.	Persons Living to One Death.	Per Cent to Deaths from All Causes.
State *a*	1,153,368	10,766	.933	107	1.451	.125	794	13.47	378	.032	3,051	3.51	574	.049	2,009	5.33
Alcona	696	6	.862	116	------	------	------	------	1	.143	696	16.66	------	------	------	------
Allegan	32,105	260	.809	123	32	.099	1,003	12.30	15	.046	2,140	5.76	11	.034	2,918	4.23
Antrim	1,985	12	.604	165	1	.050	1,985	8.33	------	------	------	------	1	.050	1,985	8.33
Barry	22,200	180	.810	123	27	.121	822	15.00	6	.027	3,700	3.33	10	.045	2,220	5.55
Bay	15,900	155	.974	102	17	.106	935	10.96	13	.081	1,223	8.38	6	.037	2,650	3.87
Benzie	2,184	23	1.053	94	4	.183	546	17.39	------	------	------	------	1	.045	2,184	4.34
Berrien	35,104	276	.786	127	44	.125	797	15.94	11	.031	3,191	3.98	11	.031	3,191	3.98
Branch	26,227	226	.861	116	45	.171	582	19.91	6	.022	4,371	2.65	22	.083	1,192	9.73

Calhoun *b*	35,382	414	1.170		62	.175	570	14.97	9	.025	3,931	2.17	19	.053	1,862	4.58
Cass	21,096	220	1.042	95	34	.161	620	15.45	10	.047	2,109	4.54	18	.085	1,172	8.18
Charlevoix	1,724	15	.870	114	1	.058	1,724	6.66	------	------	------	------	------	------	------	------
Chippewa	1,690	29	1.715	58	1	.059	1,690	3.44	------	------	------	------	1	.059	1,690	3.44
Clinton	22,851	241	1.054	94	34	.105	672	14.10	12	.051	1,904	4.97	5	.021	4,570	2.07
Delta *b*	1,456	39	2.677	37	3	.206	485	7.69	3	.206	485	7.69	2	.137	728	5.12
Eaton	25,163	205	.814	122	24	.095	1,048	11.70	9	.035	2,795	4.39	20	.079	1,258	9.75
Emmet	1,211	44	3.633	27	5	.412	242	11.36	------	------	------	------	------	------	------	------
Genesee	33,895	242	.713	140	41	.120	826	16.94	16	.047	2,118	6.61	12	.035	2,824	4.95
Grand Traverse	4,443	28	.630	158	------	------	------	------	1	.022	4,443	3.57	2	.045	2,221	7.14
Gratiot	11,808	116	.982	101	19	.160	621	16.37	1	.008	11,808	.86	10	.084	1,180	8.62
Hillsdale	31,688	270	.852	117	44	.138	720	16.29	8	.025	3,961	2.96	30	.094	1,056	11.11
Huron	9,048	64	.707	141	9	.099	1,005	14.06	5	.055	1,809	7.61	1	.011	9,048	1.56
Ingham	25,268	230	.910	109	33	.130	765	14.34	9	.035	2,807	3.91	12	.047	2,105	5.21
Ionia	27,675	271	.979	102	32	.115	864	11.80	9	.032	3,075	3.32	18	.065	1,537	6.64
Iosco	3,175	26	.818	122	5	.157	635	19.23	2	.062	1,587	7.69	1	.031	3,175	3.84
Isabella	4,113	31	.753	132	5	.121	822	16.12	1	.024	4,113	3.22	2	.048	2,056	6.45
Jackson	36,040	287	.796	125	32	.088	1,126	11.14	9	.024	4,004	3.13	14	.038	2,574	4.37
Kalamazoo	32,065	307	.957	104	29	.090	1,105	9.44	15	.046	2,137	4.88	17	.053	1,886	5.53
Kalkaska	424	3	.707	141	1	.235	424	33.33	------	------	------	------	------	------	------	------

a Except counties and townships from which no returns of deaths in 1870 were received.

b Except townships from which no returns were received; see page 217.

TABLE XXVI.—CONTINUED.

COUNTIES.	Population, June 1st, 1870.	All Causes.			Consumption.				Pneumonia.				Typhoid Fever.			
		Number of Deaths.	Per Cent to Population.	Persons Living to One Death.	Number of Deaths.	Per Cent to Population.	Persons Living to One Death.	Per Cent to Deaths from All Causes.	Number of Deaths.	Per Cent to Population.	Persons Living to One Death.	Per Cent to Deaths from All Causes.	Number of Deaths.	Per Cent to Population.	Persons Living to One Death.	Per Cent to Deaths from All Causes.
Kent	50,410	518	1.017	98	67	.132	752	12.06	17	.033	2,965	3.31	18	.035	2,800	3.50
Lake	548	4	.729	137	1	.182	.548	25.00	.....	.....	.....	.....	2	.364	274	50.00
Lapeer	21,342	149	.698	143	19	.089	1,123	12.75	6	.028	3,557	4.02	8	.037	2,667	5.36
Leelanaw	4,577	41	.895	111	2	.043	2,288	4.87	1	.021	4,577	2.43	1	.021	4,577	2.43
Lenawee	45,601	341	.747	133	45	.098	1,013	13.19	9	.019	5,066	2.63	24	.052	1,900	7.03
Livingston	19,335	163	.843	118	24	.124	805	14.72	7	.036	2,762	4.29	9	.046	2,148	5.52
Macomb	27,619	208	.753	132	35	.126	789	16.82	8	.028	3,452	3.84	7	.025	3,945	3.36
Manistee	6,074	69	1.135	88	11	.181	552	15.94	1	.016	6.074	1.44	1	.016	6,074	1.44
Marquette	14,278	266	1.863	53	15	.105	951	5.63	2	.014	7,139	.75	14	.098	1,019	5.26
Mason	3,266	20	.612	163	2	.061	1,633	10.00	1	.030	3,266	5.00	1	.030	3,266	5.00
Mecosta	5,645	70	1.240	80	5	.088	1,129	7.14	3	.053	1,881	4.28	8	.141	705	10.14
Menominee	1,895	4	.211	473	2	.105	947	50.00	.....	.....	.....	.....	.....	.....	.....	.....
Midland	3,288	45	1.370	72	7	.213	469	15.55	.....	.....	.....	.....	6	.182	547	13.33

Monroe *a*	26,455	274	1.035	96	40	.151	661	14.59	5	.018	5,291	1.82	29	.109	912	10.58
Montcalm	13,641	127	.931	107	13	.095	1,049	10.23	8	.058	1,705	6.29	11	.080	1,240	8.66
Muskegon	14,892	159	1.067	93	17	.114	876	10.69	7	.047	2,127	4.40	9	.060	1,654	5.66
Newaygo	7,292	35	.479	208	7	.095	1,041	20.00	.....	.....	.....	.....	1	.013	7,292	2.85
Oakland	40,906	255	.623	160	46	.112	889	18.03	5	.012	8,181	1.96	19	.046	2,152	7.45
Oceana	7,222	99	1.370	72	22	.304	328	22.22	6	.083	1,203	6.06	6	.083	1,203	6.06
Ontonagon	2,846	16	.562	177	3	.105	948	18.75	.....	.....	.....	.....	.....	.....	.....	.....
Osceola	2,104	10	.475	210	4	.190	526	40.00	.....	.....	.....	.....	.....	.....	.....	.....
Ottawa	26,650	261	.979	102	27	.101	987	10.34	5	.018	5,330	1.91	17	.063	1,567	6.51
Presque Isle *b*	355	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Saginaw *a*	37,591	382	1.016	98	44	.117	854	11.51	20	.053	1,879	5.23	17	.045	2,211	4.45
Sanilac	14,565	103	.707	141	8	.054	1,820	7.76	8	.054	1,820	7.76	6	.041	2,427	5.82
Schoolcraft	799	8	1.001	99	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Shiawassee	20,822	138	.662	150	23	.110	906	16.66	4	.019	5,205	2.89	17	.081	1,224	12.31
St. Clair	36,759	299	.813	122	42	.114	875	14.04	7	.019	5,251	2.34	12	.032	3,063	4.01
St. Joseph	26,272	193	.734	136	31	.117	847	16.06	8	.030	3,284	4.14	17	.064	1,545	8.80
Tuscola	18,715	84	.612	163	8	.058	1,714	9.52	5	.036	2,743	5.95	5	.036	2,743	5.95
Van Buren	28,835	259	.898	111	40	.138	720	15.44	14	.048	2,059	5.40	22	.076	1,310	8.49
Washtenaw	41,440	311	.750	133	43	.103	963	13.82	13	.031	3,187	4.18	10	.024	4,144	3.21
Wayne	119,068	1,628	1.367	73	211	.177	564	12.96	37	.031	3,218	2.27	31	.026	3,840	1.90
Wexford	650	12	1.846	54	3	.461	216	25.00	.....	.....	.....	.....	.....	.....	.....	.....

a Except townships from which no returns were received; see page 217. *b* No deaths, according to the returns.

There are two ways of obtaining the average death-rates with which to compare the mortality from Consumption and Pneumonia by counties: one is a statement of the average death-rate throughout the State; and the other is a statement of the average obtained by adding together the several statements of the death-rate in the different counties, and dividing the sum by the whole number of counties. The results are not quite identical. By the first plan, the average would be, for Consumption, .1258 per cent; for Pneumonia, .0327 per cent. By the second method it would be, for Consumption, .1254 per per cent; for Penumonia, .0380 per cent. There were forty-eight counties in which the number of inhabitants equaled or exceeded the average number living to one death in the State, from either Consumption or Pneumonia. By either plan, there were sixteen counties out of the forty-eight, in which the death-rate from Consumption exceeded, and thirty-two in which it was below the average. By the first named plan, there were twenty-one counties, out of the forty-eight, in which the death-rate from Pneumonia exceeded, and twenty-seven in which it was below the average. By the second plan, there were sixteen counties in which the death-rate from Pneumonia exceeded, and thirty-two in which it was below the average.

Taking up the correlation of these two diseases, and using the first named average,—of the sixteen counties in which the death-rate from Consumption exceeded the average, nine had less than the average mortality from Pneumonia. Of the thirty-two counties in which the death-rate from Consumption was less than the average, fourteen had more than the average mortality from Pneumonia. Of the twenty-one counties in which the death-rate from Pneumonia exceeded the average, fourteen had less than the average mortality from Consumption. Of the twenty-seven counties in which the death-rate from Pneumonia was less than the average, nine had more than the average mortality from Consumption.

Using the average obtained by finding a mean of the several counties,—of the sixteen counties in which the death-rate from Consumption exceeded the average, eleven had less than the average mortality from Pneumonia. Of the thirty-two counties in which the death-rate from Consumption was less than the average, eleven had more than the average mortality from Pneumonia. Of the sixteen counties in which the death-rate from Pneumonia exceeded the average, eleven had less than the average mortality from Consumption. Of the thirty-two counties in which the death-rate from Pneumonia was less than the average, eleven had more than the average mortality from Consumption.

By the first plan, out of the forty-eight counties, the correlation holds fully in twenty-three. By the second plan it holds in twenty-two. In either case it falls a little short of a majority; but in many cases there appears a difference, rather than a similarity, although not amounting to opposition. Taking the year 1870 in this State by itself, no such correlation between Consumption and Pneumonia by counties appears to be fully proven; but taking all the cases which the compiler has examined, the evidence seems to be conclusive that a correlation of this nature exists. Upon what this correlation depends, is not altogether apparent. Having the impression that it might depend, in part, upon the age and sex of the inhabitants being different in different counties, the compiler made such examination as could well be done without great labor, but did not find sufficient evidence to warrant the statement that it is entirely, or even greatly dependent upon the difference in age alone. Some of the evidences of correlation might result simply from the fact that Consumption continues more or less steadily throughout every part of the year, while Pneumonia seems to be much more dependent upon climate and season; Consumption is also more equally distributed as regards age, sex, and locality; but taken altogether, it does not appear that the evidence can

all be thus accounted for. Again, it must be remembered that the statements of the causes of death come, very often, from non-professional people, and some cases of death from one disease may be attributed to the other; but this will not account for the correlation. It will be seen by "Exhibits M and N," that the evidence is strong that the atmospheric conditions were not only different, but opposite, in the different months in which the mortality was greatest from these diseases.

Since the publication of the last report, the compiler has applied the method of study adopted therein, to the results of the United States Census of 1860, for all the States, and has found that the law of correlation between Consumption and Pneumonia holds, so far as geographical distribution, sex, and in a certain sense, age are concerned, throughout the United States; although it cannot be studied by per cent to population, as that is not shown in the Statistics, but only by proportion of mortality compared with deaths from all causes. The Twenty-fourth Registration Report of Massachusetts, for the year 1865 (page 73), gives the relative mortality from Pneumonia, compared with all causes, from which it appears to have been more fatal in inland than in seaboard counties, which was the reverse of what was true of Consumption. In fact, examination of the Registration Reports of Massachusetts for a series of years, leads to the conclusion that so far as geographical distribution in that State is concerned, the two diseases are undoubtedly correlated in an opposite manner, in at least an equal number, if not in a majority of cases; although the same exceptions are found as appeared in this State when the subject was first studied, namely, that where there was an extremely great excess of deaths from either disease, there was apt to be more than an average from the other; and also where the mortality was very slight from either, the reverse was true, furnishing exceptions to the rule of opposite correlation, although the difference was in many cases quite marked. In Massachusetts, the same law applies to sex; an excess of

females from Consumption and of males from Pneumonia, being the rule. It also applies, in that State, to age in a general way, the greater number of deaths from Consumption being of persons betwen the ages of twenty and fifty, and from Pneumonia, of persons aged under twenty and over fifty. If all the deaths be separated into three classes, those of persons aged under twenty in one, those aged twenty to fifty in another, and of those aged fifty and over in the third, then less than one-third of the whole number of deaths from Consumption, and more than one-third the whole number from Pneumonia, will have occurred among persons aged under twenty years; while the reverse will be true of the next period; but for the last period, less than one-third the number will have died from both diseases. In this way, therefore, the law of opposition holds in just two out of three times. This is true for Michigan in 1869, for Massachusetts for all the years which the compiler has examined, and for the whole United States, according to his computation from results of United States Census for 1860. At the date of this writing, the results of the Census for 1870 have not yet been published. Future research may make the evidence more complete, and very likely may furnish some modifications, aside from those already pointed out.

As before intimated, the reason for the difference between the diseases, as regards geographical distribution, etc., does not appear to be accounted for by any one or two of the considerations before mentioned; but it is, nevertheless, quite probable, that when they can all be grouped together, the explanation will appear.

TABLE XXVII.

Exhibiting, for the State and Eleven Geographical Divisions of Michigan, by Sex, the Population, the Number of Deaths, the Death-rate, and the Number Living to One Death, for Deaths during 1870 at All Ages, of Old Age, of All Aged 70 and Over, and of All Aged Under 5; also the Per Cent of Deaths from Old Age, of All Aged 70 and Over, and of All Aged Under 5, to Deaths at All Ages.

State and Geographical Divisions. a	Sex.	Population June 1st, 1870.	All Ages.			Old Age.				All Aged 70 and Over.				All Aged Under 5.			
			Number of Deaths.	Per Cent to Population.	Persons Living to One Death.	Number of Deaths.	Per Cent to Population.	Persons Living to One Death.	Per Cent of Deaths at All Ages.	Number of Deaths.	Per Cent to Population.	Persons Living to One Death.	Per Cent of Deaths at All Ages.	Number of Deaths.	Per Cent to Population.	Persons Living to One Death.	Per Cent of Deaths at All Ages.
State b	Total	1,158,368	10,766	.933	107	318	.027	3,684	2.90	878	.076	1,313	8.15	4,585	.397	251	42.58
	Males	600,806	5,589	.930	107	147	.024	4,087	2.63	500	.083	1,201	8.94	2,501	.416	240	44.74
	Females	552,562	5,140	.930	107	166	.029	3,328	3.22	378	.068	1,461	7.35	2,054	.371	269	39.96
	Unknown	.....	37	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30	.....	.....	81.08
Upper Peninsula b	Total	22,964	362	1.576	63	5	.021	4,592	1.38	7	.030	3,280	1.93	239	1.040	96	66.02
	Males	13,467	180	1.336	74	1	.007	13,467	.55	5	.022	4,489	1.66	118	.876	114	65.55
	Females	9,497	180	1.895	52	4	.042	2,374	2.22	4	.042	2,374	2.22	120	1.263	79	66.66
	Unknown	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	50.00

Northwestern *b*	Total	17,928	173	.964	103	2	.011	8,964	1.15	3	.016	5,976	1.73	95	.529	188	54.91
	Males	9,760	100	1.024	97	1	.010	9,760	1.00	2	.020	4,880	2.00	51	.522	191	51.00
	Females	8,168	73	.893	111	1	.012	8,168	1.36	1	.012	8,168	1.36	44	.538	185	60.27
Northern *b*	Total	5,844	74	1.384	72	1	.018	5,844	1.85	3	.056	1,781	4.05	51	.954	104	68.91
	Males	2,932	45	1.534	65	1	.034	2,932	2.22	3	.102	977	10.34	34	1.159	86	75.55
	Females	2,412	29	1.202	83	.....	.....	.....	.....	.....	.....	.....	.....	17	.704	141	58.62
Northeastern *b*	Total	4,226	32	.757	132	.....	.....	.....	.....	.....	.....	.....	.....	16	.378	264	50.00
	Males	2,535	15	.591	169	.....	.....	.....	.....	.....	.....	.....	.....	6	.236	422	40.00
	Females	1,691	17	1.005	99	.....	.....	.....	.....	.....	.....	.....	.....	10	.591	169	58.82
Western	Total	112,384	1,101	.979	102	27	.024	4,162	2.45	74	.065	1,518	6.72	506	.450	222	45.95
	Males	59,762	578	.967	103	13	.021	4,597	2.24	44	.073	1,358	7.61	272	.957	219	47.05
	Females	52,622	518	.984	101	14	.026	3,758	2.70	30	.057	1,754	5.79	230	.437	228	44.40
	Unknown	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	80.00
Northern Central *b*	Total	13,041	146	1.119	89	3	.023	4,347	2.05	6	.046	2,173	4.10	64	.490	203	43.83
	Males	7,085	70	.988	101	1	.014	7,085	1.42	5	.070	1,417	7.14	34	.479	208	48.57
	Females	5,956	76	1.276	78	2	.033	2,978	2.63	1	.016	5,956	1.31	30	.503	198	39.47

a For counties included, see page 217.

b Except counties and townships from which no returns of deaths were received; see page 217.

TABLE XXVII.—CONTINUED.

GEOGRAPHICAL DIVISIONS.	SEX.	Population June 1st, 1870.	All Ages.			Old Age.				All Aged 70 and Over.				All Aged Under 5.			
			Number of Deaths.	Per Cent to Population.	Persons Living to One Death.	Number of Deaths.	Per Cent to Population.	Persons Living to One Death.	Per Cent of Deaths at All Ages.	Number of Deaths.	Per Cent to Population.	Persons Living to One Death.	Per Cent of Deaths at All Ages.	Number of Deaths.	Per Cent to Population.	Persons Living to One Death.	Per Cent of Deaths at All Ages.
Central	Total	222,658	1,918	.859	116	70	.031	3,180	3.65	182	.081	1,223	9.51	731	.328	304	38.21
	Males	115,765	956	.825	121	34	.029	3,404	3.55	108	.088	1,123	10.77	388	.335	298	40.58
	Females	106,893	945	.884	113	36	.033	2,969	3.80	79	.073	1,353	8.35	334	.312	320	35.34
	Unknown	.....	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9	.....	.....	75.00
Bay and Eastern Shore *a*	Total	148,920	1,236	.829	120	36	.024	4,136	2.91	80	.053	1,861	6.47	594	.398	250	48.05
	Males	79,287	641	.808	123	17	.021	4,663	2.65	45	.056	1,761	7.02	304	.383	260	47.42
	Females	69,633	594	.853	117	19	.027	3,664	3.19	35	.050	1,988	5.89	289	.415	240	48.65
	Unknown	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	100.00

Southwestern	Total	117,140	1,015	.866	115	25	.021	4,685	2.46	88	.075	1,381	8.66	402	.343	291	39.60
	Males	60,908	529	.868	115	11	.018	5,587	2.07	46	.075	1,324	8.69	224	.384	260	44.23
	Females	56,232	484	.860	116	14	.024	4,016	2.89	42	.074	1,338	8.67	167	.296	336	34.50
	Unknown	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	50.00
Southern Central *b*	Total	274,715	2,349	.855	116	73	.025	3,763	3.10	252	.091	1,090	10.72	770	.280	356	32.35
	Males	140,705	1,222	.868	115	38	.027	3,702	3.10	151	.107	931	12.85	450	.319	312	36.82
	Females	134,010	1,120	.835	119	35	.026	3,828	3.12	101	.075	1,326	9.01	314	.234	426	28.03
	Unknown	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	.....	.....	85.71
Southeastern *c*	Total	214,048	2,365	1.104	90	71	.033	3,014	3.00	188	.085	1,169	7.73	1,117	.521	191	47.23
	Males	108,600	1,253	1.153	86	30	.027	3,620	2.39	98	.090	1,108	7.82	610	.561	178	48.68
	Females	105,448	1,104	1.046	95	41	.038	2,571	3.71	85	.080	1,240	7.69	499	.473	211	45.19
	Unknown	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	.....	.....	100.00

a Except township of Chesaning, in county of Saginaw, from which no returns were received.

b Except township of Battle Creek, in county of Calhoun.

c Except township of Ida, in county of Monroe.

EXHIBIT Q.

The Eleven Geographical Divisions of the State, arranged in Order of Mortality of All Aged under 5, and of All Aged 70 Years and over; those having the greatest, first.

ALL AGED UNDER 5 YEARS.			ALL AGED 70 YEARS AND OVER.		
Order.	State and Geographical Divisions.	Per Cent of Deaths in 1870, to Population of same Ages.	Order.	State and Geographical Divisions.	Per Cent of Deaths in 1870, to Population of same Ages.
	State	.397		State	.076
1	Upper Peninsula	1.040	1	Southern Central	.091
2	Northern *a*	.954	2	Southeastern *a*	.085
3	Northwestern	.529	3	Central *b*	.081
4	Southeastern *a*	.521	4	Upper Peninsula	.080
5	Northern Central *a*	.490		AVERAGE THROUGHOUT STATE.	
6	Western *a*	.450	5	Southwestern *a b*	.075
7	Bay and Eastern Shore *b*	.398	6	Western *a*	.065
	AVERAGE THROUGHOUT STATE.		7	Northern *a*	.056
8	Northeastern *b*	.378	8	Bay and Eastern Shore *b*	.058
9	Southwestern *a b*	.343	9	Northern Central *a*	.046
10	Central *b*	.328	10	Northwestern	.016
11	Southern Central	.280	11	Northeastern *b*	.000

a Divisions in which there was more than the average mortality from Consumption.

b Divisions in which there was more than the average mortality from Pneumonia. See "Exhibit P."

TABLE XXVIII.

Exhibiting, for the State and Counties of Michigan, the Average Age of the Inhabitants of Each Sex, the Number of Deaths, the Death-rate, and the Number Living to one Death, for Deaths during the Year 1870 at all Ages, of Old Age, of all Aged 70 and Over, and of all Aged Under 5; Also the Per Cent of Deaths from Old Age, of all Aged 70 and Over, and of all Aged Under 5 to Deaths at all Ages.

STATE AND COUNTIES.	Average Age of Inhabitants June 1st, 1870.		All Ages.			Old Age.				All Aged 70 and Over.				All Aged Under 5.			
	Males.	Females.	Number of Deaths.	Per Cent to Population.	Persons Living to One Death.	Number of Deaths.	Per Cent to Population.	Persons Living to One Death.	Per Cent of Deaths at All Ages.	Number of Deaths.	Per Cent to Population.	Persons Living to One Death.	Per Cent of Deaths at All Ages.	Number of Deaths.	Per Cent to Population.	Persons Living to One Death.	Per Cent of Deaths at All Ages.
State *a*	24.91	23.68	10,766	.983	107	313	.027	3,684	.29	878	.076	1,313	8.15	4,585	.397	251	42.58
Alcona	23.26	20.65	6	.862	116	------	------	------	------	------	------	------	------	4	.578	174	66.66
Allegan	24.11	23.26	260	.809	123	7	.021	4,586	2.69	20	.062	1,605	7.69	102	.317	314	39.23
Antrim	23.29	21.84	12	.604	165	------	------	------	------	2	.100	990	16.66	8	.403	248	66.66
Barry	24.74	23.56	180	.810	123	8	.036	2,775	4.44	20	.090	1,110	11.11	63	.283	352	35.00
Bay	23.42	21.12	155	.974	102	8	.018	5,300	1.92	6	.037	2,650	3.87	95	.597	167	61.29
Benzie	25.84	22.28	23	1.053	94	------	------	------	------	1	.045	2,184	4.34	12	.549	182	52.17

a Except counties and townships not represented by returns of deaths; see page 217. The statement of average age is of all inhabitants of the State.

TABLE XXVIII.—CONTINUED.

COUNTIES.	Average Age of Inhabitants June 1st, 1870.		All Ages.			Old Age.				All Aged 70 and Over.				All Aged Under 5.			
	Males.	Females.	Number of Deaths.	Per Cent to Population.	Persons Living to One Death.	Number of Deaths.	Per Cent to Population.	Persons Living to One Death.	Per Cent of Deaths at All Ages.	Number of Deaths.	Per Cent to Population.	Persons Living to One Death.	Per Cent of Deaths at All Ages.	Number of Deaths.	Per Cent to Population.	Persons Living to One Death.	Per Cent of Deaths at All Ages.
Berrien	24.71	23.26	276	.786	127	3	.008	11,701	1.08	21	.059	1,671	7.60	122	.347	287	44.20
Branch	26.67	25.58	226	.861	116	3	.011	8,742	1.32	23	.087	1,140	10.17	74	.281	354	32.74
Calhoun *a*	26.42	25.48	414	1.170	85	8	.022	4,422	1.93	31	.087	1,141	7.48	162	.457	218	39.13
Cass	24.93	24.06	220	1.042	95	7	.033	3,013	3.18	24	.113	879	10.90	78	.369	270	35.45
Charlevoix	23.25	21.20	15	.870	114	.....	.....	.....	.....	.....	.....	.....	.....	9	.522	191	60.00
Chippewa	23.35	23.17	29	1.715	58	3	.177	563	10.34	2	.118	845	6.89	16	.946	105	55.17
Clinton	24.59	23.48	241	1.054	94	10	.043	2,285	4.14	24	.105	952	9.95	84	.367	272	34.85
Delta *a*	24.45	19.27	39	2.677	37	.....	.....	.....	.....	.....	.....	.....	.....	23	1.579	63	58.97
Eaton	25.43	24.05	235	.814	122	9	.035	2,795	4.39	18	.071	1,397	8.78	74	.294	340	36.09
Emmet	23.33	24.00	44	3.633	27	.....	.....	.....	.....	.....	.....	.....	.....	34	2.807	35	77.27
Genesee	25.72	24.55	242	.713	140	8	.023	3,895	3.30	30	.088	1,129	12.39	99	.292	342	40.90
Grand Traverse	23.54	21.93	23	.630	158	1	.022	4,443	3.57	1	.022	4,443	3.57	12	.270	370	42.85

Gratiot	23.35	21.92	116	.982	101	4	.083	2,952	3.44	8	.067	1,476	6.89	50	.423	236	43.10
Hillsdale	26.51	25.29	270	.852	117	10	.031	3,168	3.70	32	.100	990	11.85	68	.214	466	25.18
Huron	22.49	20.21	64	.707	141	2	.022	4,524	3.12	5	.055	1,809	7.81	28	.309	323	43.75
Ingham	25.09	24.38	230	.910	109	14	.055	1,804	6.08	24	.094	1,052	10.43	85	.336	297	36.95
Ionia	25.16	24.07	271	.979	102	8	.028	3,459	2.95	21	.075	1,317	7.74	111	.401	249	40.95
Iosco	23.99	21.09	26	.818	122	.....	.....	.....	.....	.....	.....	.....	.....	12	.377	264	46.15
Isabella	23 39	20.49	31	.758	132	1	.024	4,118	3.22	.....	.....	.....	.....	19	.461	216	61.29
Jackson	26.71	24.99	287	.796	125	8	.022	4,505	2.78	27	.074	1,334	9.40	101	.280	356	35.19
Kalamazoo	25.94	25.10	307	.957	104	13	.040	2,466	4.23	30	.093	1,068	9.77	93	.290	344	30.29
Kalkaska	24.38	18.83	3	.707	141	1	.235	424	33.33	1	.235	424	33.33	.....	.....	.....	.....
Kent	25.32	24.00	513	1.017	98	19	.037	2,653	3.70	47	.093	1,072	9.16	220	.436	229	42.83
Lake	24.01	20.68	4	.729	137	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lapeer	24.57	23.10	149	.698	143	5	.023	4,268	3.35	12	.056	1,778	8.05	63	.295	338	42.28
Leelanaw	23.40	21.64	41	.895	111	.....	.....	.....	.....	1	.021	4,577	2.43	24	.524	190	58.53
Lenawee	27.03	26.15	341	.747	133	10	.021	4,560	2.93	35	.076	1,302	10.26	107	.234	426	31.37
Livingston	26.01	24.93	163	.843	118	3	.015	6,445	1.84	15	.077	1,289	9.20	64	.331	302	39.26
Macomb	25.31	24.38	208	.753	132	11	.039	2,510	5.28	25	.090	1,104	12.01	78	.282	354	37.50
Manistee	23.55	20.37	69	1.135	88	1	.016	6,074	1.44	.....	.....	.....	.....	38	.625	159	55.07
Marquette	23.04	20.00	266	1.863	53	2	.014	7,139	.75	3	.021	4,759	1.12	183	1.281	78	68.79
Mason	24.27	21.27	20	.612	163	.....	.....	.....	.....	1	.030	3,266	5.00	11	.336	296	55.00
Mecosta	23.86	20.97	70	1.240	80	2	.035	2,822	2.85	4	.070	1,411	5.71	27	.748	209	38.57

a Except townships not represented by returns of deaths; see page 217. The statement of average age is of all inhabitants of the county.

TABLE XXVIII.—CONTINUED.

COUNTIES.	Average Age of Inhabitants June 1st, 1870.		All Ages.			Old Age.				All Aged 70 and Over.				All Aged Under 5.			
	Males.	Females.	Number of Deaths.	Per Cent to Population.	Persons Living to One Death.	Number of Deaths.	Per Cent to Population.	Persons Living to One Death.	Per Cent of Deaths at All Ages.	Number of Deaths.	Per Cent to Population.	Persons Living to One Death.	Per Cent of Deaths at All Ages.	Number of Deaths.	Per Cent to Population.	Persons Living to One Death.	Per Cent of Deaths at All Ages.
Menominee	23.79	19.42	4	.211	473	.....	.....	.....	.....	.....	.....	.....	.....	2	.105	947	50.00
Midland	24.14	21.58	45	1.370	72	.....	.....	.....	.....	2	.060	1,641	4.44	18	.540	182	40.00
Monroe *a*	24.12	23.28	274	1.085	96	11	.045	2,405	4.01	35	.132	755	12.77	105	.396	251	38.32
Montcalm	23.64	22.45	127	.931	107	2	.014	6,820	1.57	7	.051	1,948	5.51	55	.403	248	43.30
Muskegon	24.09	22.00	159	1.067	93	.....	.....	.....	.....	8	.020	4,964	1.88	81	.543	183	50.94
Newaygo	23.51	21.50	35	.479	208	.....	.....	.....	.....	.....	.....	.....	.....	15	.205	486	42.85
Oakland	26.57	25.81	255	6.23	160	13	.031	3,146	5.09	37	.090	1,105	14.50	69	.168	592	27.05
Oceana	24.03	22.57	99	1.370	72	.....	.....	.....	.....	5	.069	1,444	5.05	39	.540	185	39.39
Ontonagon	21.07	19.25	16	.562	177	.....	.....	.....	.....	1	.035	2,846	6.25	10	.351	284	62.50
Osceola	23.27	20.52	10	.475	210	.....	.....	.....	.....	1	.047	2,104	10.00	5	.237	420	50.00
Ottawa	23.95	22.19	261	.979	102	8	.030	3,331	3.06	17	.063	1,567	6.51	135	.506	197	51.72
Presque Isle	25.13	19.38	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Saginaw *a*	23.81	21.62	382	1.016	98	2	.005	18,795	.52	15	.039	2,506	3.92	206	.548	182	53.92
Sanilac	22.30	20.62	103	.707	141	4	.027	3,641	3.88	8	.054	1,320	7.76	43	.295	338	41.74
Schoolcraft	24.07	19.49	8	1.001	99	.....	.....	.....	.....	1	.125	799	12.50	5	.625	159	62.50
Shiawassee	24.69	23.67	138	.662	150	4	.019	5,205	2.89	15	.072	1,388	10.86	46	.220	452	33.33
St. Clair	23.61	22.26	199	.813	122	18	.048	2,042	6.02	26	.070	1,413	8.69	121	.329	303	40.46
St. Joseph	25.85	24.75	198	.734	136	8	.130	3,284	4.14	20	.076	1,313	10.36	65	.247	404	33.67
Tuscola	23.53	21.99	84	.612	163	2	.014	6,857	2.38	8	.058	1,714	9.52	38	.277	360	45.23
Van Buren	25.24	23.90	259	.898	111	8	.027	3,604	3.08	23	.079	1,253	8.88	100	.346	288	38.61
Washtenaw	26.36	25.32	311	.750	133	13	.031	3,187	4.18	54	.130	767	17.36	100	.241	414	32.15
Wayne	24.37	23.54	1,628	1.367	73	36	.030	3,307	2.21	86	.072	1,384	5.28	865	.726	137	53.13
Wexford	24.66	22.07	12	1.846	54	.....	.....	.....	.....	.....	.....	.....	.....	9	1.384	72	75.00

a Except township of Ida, not represented by returns of deaths; see page 217. The statement of average age is of all inhabitants of the county.

TABLE XXIX.

Showing for the Year and Months, by Sex, the Conjugal Condition, Occupation, and Age, in Periods of Years, of all who died from Consumption in Michigan during the year ending December 31st, 1870.

MONTHS, 1870.															SEX AND OCCUPATION.	AGES IN PERIODS.																
January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Year 1870. a	Conjugal Condition.		Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 and over.	Unknown.
81	74	118	110	112	118	114	142	175	127	137	139	8	1450	Total	Total Deaths from Consumption. a	135	21	28	132	200	151	137	113	87	69	75	60	65	59	46	21	22	29
31	43	60	55	48	63	61	69	90	70	76	79	1	746	Married .		...	..	..	16	71	97	102	81	73	59	53	46	51	40	23	9	8	17
33	23	45	46	50	43	44	60	67	43	48	46	1	549	Single....		134	21	26	115	125	49	25	19	4	4	5	3	3	2	2	1	4	7
15	5	10	7	9	4	7	10	13	9	9	9	1	108	Widowed		...	..	..	...	2	5	6	7	5	6	9	5	9	15	18	10	9	2
2	3	3	2	5	8	2	3	5	5	4	5	..	47	Unknown		1	..	2	1	2	...	4	6	5	..	8	6	2	2	3	1	1	3
41	45	56	61	52	62	58	73	82	67	77	73	1	753	Total	Females.	56	12	20	92	112	90	77	61	38	33	36	23	27	22	19	10	9	16
18	29	30	31	23	34	30	29	43	42	47	48	..	404	Married..		...	..	..	16	58	72	59	47	33	29	28	16	20	10	5	2	1	8
12	11	20	26	20	23	19	35	29	17	26	24	1	263	Single....		56	12	19	75	52	15	15	7	1	..	1	1	..	2	1	1	2	3
10	3	6	4	7	4	7	8	8	7	4	4	..	72	Widowed		...	..	..	...	2	3	2	5	3	4	6	5	5	10	12	7	6	2
1	2	...	...	2	1	2	1	2	1	...	2	..	14	Unknown		...	..	1	1	...	...	1	2	1	..	1	1	2	..	1	..	..	2

40	29	62	49	60	56	56	69	93	60	60	61	2	697	Total		79	9	8	40	88	61	60	52	49	36	39	37	33	37	27	11	13	13
31	14	30	24	25	29	31	40	47	28	29	31	1	342	Married..		---	--	--	---	13	25	43	34	40	30	25	30	31	30	18	7	7	9
21	12	25	20	30	20	25	25	33	26	22	22	--	286	Single....	MALES.	78	9	7	40	73	34	10	12	3	4	4	2	3	--	1	--	2	4
5	2	4	3	2	---	---	2	5	2	5	5	1	36	Widowed		---	--	--	---	---	2	4	2	2	2	3	--	4	5	6	3	3	--
1	1	3	2	3	7	---	2	3	4	4	3	--	33	Unknown		1	--	1	---	2	--	3	4	4	--	7	5	--	2	2	1	1	--
41	41	48	57	52	66	55	68	88	63	79	70	--	728	Total		111	13	20	74	102	71	63	49	40	32	30	23	25	23	15	13	8	16
16	25	25	26	24	33	23	28	39	32	41	36	--	348	Married..	Occupations	---	--	--	12	48	54	47	38	34	28	23	15	17	13	5	4	2	8
17	12	17	25	19	29	27	32	41	27	31	26	--	303	Single....	Unknown.	110	13	19	61	53	14	13	5	3	1	1	2	1	1	--	1	1	4
7	2	5	5	7	2	3	7	8	4	5	6	--	61	Widowed	Total.	---	--	--	---	1	3	2	4	3	3	5	2	5	9	9	8	5	2
1	2	1	1	2	2	2	1	---	---	2	2	--	16	Unknown		1	--	1	1	---	---	1	2	--	--	1	4	2	--	1	--	--	2
32	35	38	43	35	46	39	54	66	46	62	55	--	551	Total		48	8	16	68	82	61	51	42	30	24	25	16	22	19	10	9	6	14
16	23	19	22	17	26	19	23	34	27	38	33	--	297	Married..	Occupations	---	--	--	12	45	50	38	32	28	21	20	12	15	9	4	2	1	8
8	8	14	18	12	17	15	24	24	15	21	17	--	193	Single....	Unknown.	48	8	16	55	36	9	11	4	--	--	1	1	--	1	--	1	--	2
7	2	5	3	5	2	3	6	8	4	3	4	--	52	Widowed	Females.	---	--	--	---	1	2	1	4	2	3	4	2	5	9	6	6	5	2
1	2	---	---	1	1	2	1	---	---	---	1	--	9	Unknown		---	--	--	1	---	---	1	2	--	--	--	1	2	--	--	--	--	2
9	6	10	14	17	20	16	14	22	17	17	15	--	177	Total		63	5	4	6	20	10	12	7	10	8	5	7	3	4	5	4	2	2
--	2	6	4	7	7	4	5	5	5	3	3	--	51	Married..	Occupations	---	--	--	---	3	4	9	6	6	7	3	3	2	4	1	2	1	--
9	4	3	7	7	12	12	8	17	12	10	9	--	110	Single....	Unknown.	62	5	3	6	17	5	2	1	3	1	--	1	1	--	--	--	1	2
--	--	---	2	2	---	---	1	---	---	2	2	--	9	Widowed	Males.	---	--	--	---	---	1	1	---	1	--	1	--	--	--	3	2	--	--
--	--	1	1	1	1	---	---	---	---	2	1	--	7	Unknown		1	--	1	---	---	---	---	---	--	--	1	3	--	--	1	--	--	--

a One unknown sex in unknown months, aged 30 to 40, not included.

TABLE XXIX.—CONTINUED.—DEATHS FROM CONSUMPTION, 1870.

MONTHS, 1870.													YEAR 1870.	CONJUGAL CONDITION.	SEX AND OCCUPATION.	AGES IN PERIODS.																	
January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.				Under 5	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 and over.	Unknown.
40	34	69	58	60	50	59	74	88	65	59	68	8	722	Total	All Specified Occupations. Totals. *a*	24	8	8	58	98	80	74	64	47	37	45	37	40	36	31	8	14	13
15	18	35	29	24	30	38	41	51	38	35	43	1	398	Married..		...	..	..	4	23	43	55	43	39	31	30	31	34	27	18	5	6	9
16	12	27	21	31	14	17	28	26	16	17	20	1	246	Single....		24	8	7	54	72	35	12	14	1	3	4	1	2	1	2	..	3	3
8	3	5	2	2	2	4	3	5	5	4	3	1	47	Widowed		...	..	..	...	1	2	4	3	2	3	4	3	4	6	9	2	4	..
1	1	2	1	3	4	...	2	6	6	3	2	..	31	Unknown		...	..	1	...	2	...	3	4	5	..	7	2	..	2	2	1	1	1
9	10	18	18	17	16	19	19	16	21	15	23	1	202	Total	Specified Occupations. Females. (Class XII.)	8	4	4	24	30	29	26	19	8	9	11	7	5	3	9	1	3	2
2	6	11	9	6	8	11	6	9	15	9	15	..	107	Married..		...	..	..	4	18	22	21	15	5	8	8	4	5	1	1	..	..	..
4	3	6	8	8	6	4	11	5	2	5	7	1	70	Single....		8	4	3	20	16	6	4	3	1	..	..	..	..	1	1	..	2	1
3	1	1	1	2	2	4	2	...	3	1	...	..	20	Widowed		...	..	..	..	1	1	1	1	1	1	2	3	..	1	6	1	1	..
..	..	...	...	1	...	...	...	2	1	...	1	..	5	Unknown		...	..	1	...	...	...	...	..	1	..	1	..	..	..	1	..	..	1
31	28	52	35	43	36	40	55	71	42	43	46	2	520	Total	Specified Occupations. Males. (Classes I.—XI.) *b*	16	4	4	34	68	51	48	45	39	28	34	30	35	33	22	7	11	11
18	12	24	20	18	22	27	35	42	23	26	28	1	291	Married..		...	..	..	...	10	21	34	28	34	23	22	27	29	26	17	5	6	9
12	8	22	13	23	8	13	17	21	14	12	13	..	176	Single....		16	4	4	31	56	29	8	11	..	3	4	1	2	..	1	..	1	2
5	2	4	1	...	...	...	1	5	2	3	3	1	27	Widowed		...	..	.	...	...	1	3	2	1	2	2	..	4	5	3	1	3	..
1	1	2	1	2	6	...	2	3	4	2	2	..	26	Unknown		...	..	..	...	2	...	3	4	4	..	6	2	..	2	1	1	1	..

17	8	30	17	20	9	19	31	28	18	21	21	1	240	Total	Class I. Cultivators of the Earth.	---	--	1	13	32	20	19	16	20	13	15	14	25	22	14	7	4	5
7	4	16	11	8	9	13	22	18	11	15	16	--	150	Married		---	--	--	---	4	6	16	11	17	10	12	13	20	19	11	5	2	4
6	1	10	5	11	---	6	8	5	6	6	3	--	67	Single		---	--	1	13	27	13	2	3	--	2	1	1	2	--	--	--	1	1
3	2	3	1	---	---	---	1	3	1	---	2	1	17	Widowed		---	--	--	---	---	1	1	2	--	1	2	--	3	3	2	1	1	--
1	1	1	---	1	---	---	---	2	---	---	---	.	6	Unknown		---	--	--	---	1	---	---	---	3	--	--	--	--	--	1	1	--	--
2	2	1	1	3	3	1	3	5	4	2	---	--	27	Total	Class II. Active Mechanics Abroad.	---	--	--	1	3	4	3	1	3	4	2	1	2	2	--	--	1	--
2	2	1	---	3	2	1	2	4	1	1	---	--	19	Married		---	--	--	---	1	2	2	1	3	4	1	1	2	1	--	--	1	--
--	--	---	1	---	---	---	1	1	2	---	---	--	5	Single		---	--	--	1	2	2	---	---	--	--	--	--	--	--	--	--	--	--
--	--	---	---	---	---	---	---	---	---	---	---	--	---	Widowed		---	--	--	---	---	---	---	---	--	--	--	--	--	--	--	--	--	--
--	--	---	---	---	1	---	---	---	1	1	---	--	3	Unknown		---	--	--	---	---	---	1	---	--	--	1	--	--	1	--	--	--	--
3	2	---	2	7	4	4	3	3	3	2	4	--	37	Total	Class III. Active Mechanics in Shops.	---	--	--	2	3	3	3	8	6	--	2	6	2	1	1	--	--	--
2	1	---	1	3	2	3	3	3	3	2	3	--	26	Married		---	--	--	---	---	1	2	6	6	--	2	5	2	1	1	--	--	--
1	1	---	---	4	2	1	---	---	---	---	---	--	9	Single		---	--	--	2	3	2	---	2	--	--	--	--	--	--	--	--	--	--
--	--	---	---	---	---	---	---	---	---	---	---	--	---	Widowed		---	--	--	---	--	---	---	---	--	--	--	--	--	--	--	--	--	--
--	--	---	1	---	---	---	---	---	---	---	1	--	2	Unknown		---	--	--	---	---	---	1	---	--	--	--	1	--	--	--	--	--	--
--	2	---	1	---	---	1	---	3	1	2	2	--	12	Total	Class IV. Inactive Mechanics in Shops.	---	--	--	1	2	2	1	---	1	2	1	--	1	--	--	--	1	--
--	1	---	---	---	---	---	---	2	1	2	1	--	7	Married		---	--	--	---	---	1	---	---	1	2	1	--	1	--	--	--	1	--
--	1	---	1	---	---	1	---	1	---	---	1	--	5	Single		---	--	--	1	2	1	1	---	--	--	--	--	--	--	--	--	--	--
--	--	---	---	---	---	---	---	---	---	---	---	--	---	Widowed		---	--	--	---	---	---	---	---	--	--	--	--	--	--	--	--	--	--
--	--	---	---	---	---	---	---	---	---	---	---	--	---	Unknown		---	--	--	---	---	---	---	---	--	--	--	--	--	--	--	--	--	--

a Includes "Unoccupied" males in Class XI., and females in Class XII. *b* Includes "Unoccupied" in Class XI.

TABLE XXIX.—CONTINUED.—DEATHS FROM CONSUMPTION, 1870.

MONTHS, 1870.													YEAR 1870.	CONJUGAL CONDITION.	SEX AND OCCUPATION.	AGES IN PERIODS.																
January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.				Under 5.	5 to 10	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 and over.	Unknown.
4	4	6	4	6	5	6	7	10	4	4	6	..	66	Total	CLASS V. Laborers—no Special Trades.	...	..	..	6	8	6	8	9	2	4	6	5	2	3	2	..	2	3
1	2	3	4	2	1	4	2	6	2	3	4	..	34	Married..		...	..	..	...	2	3	5	5	1	3	3	5	2	1	2	..	..	2
2	2	3	...	3	1	2	3	3	1	1	2	..	23	Single....		...	..	..	6	5	3	3	2	..	1	2	..	..	..	..	..	..	1
1	..	...	...	...	...	...	...	1	...	...	...	..	2	Widowed		...	..	..	...	...	...	...	...	..	..	..	..	..	1	..	..	1	..
..	..	...	...	1	3	...	2	...	1	...	...	..	7	Unknown		...	..	..	...	1	...	...	2	1	..	1	..	..	1	..	..	1	..
..	..	3	3	...	1	2	1	1	...	2	2	..	15	Total	CLASS VI. Agents, Laborers Abroad, etc.	...	..	..	1	4	1	2	2	2	1	..	1	..	..	1	..	..	..
..	..	2	...	...	1	2	1	1	...	...	1	..	8	Married..		...	..	..	...	2	1	1	1	1	..	..	1	..	..	1	..	..	..
..	..	1	3	...	...	...	...	...	...	...	1	..	5	Single....		...	..	..	1	2	...	1	1	..	..	..	..	..	..	..	..	..	..
..	..	...	...	...	...	...	...	...	...	2	...	..	2	Widowed		...	..	..	...	...	...	...	...	1	1	..	..	..	..	..	..	..	..
..	..	...	...	...	...	...	...	2	...	...	1	..	3	Total	CLASS VII. Seafaring Men.	...	..	..	...	...	2	...	...	..	..	..	1	..	..	..	..	..	..
..	..	...	...	...	...	...	...	1	...	...	...	..	1	Married..		...	..	..	...	...	1	...	...	..	..	..	..	..	..	..	..	..	..
..	..	...	...	...	...	...	...	...	...	...	1	..	1	Single....		...	..	..	...	...	1	...	...	..	..	..	.	..	..	..	..	..	..
..	..	...	...	...	...	...	...	1	...	...	...	..	1	Unknown		...	..	..	...	...	...	...	...	..	..	..	1	..	..	..	..	..	..

--	--	---	---	---	1	---	---	---	1	---	---	--	2	Total	Class VIII. Soldiers.	---	--	--	---	---	---	1	---	--	--	--	--	1	--	--	--	--	--
--	--	---	---	---	1	---	---	---	---	---	---	--	1	Single		---	--	--	---	---	---	1	---	--	--	--	--	--	--	--	--	--	--
--	--	---	---	---	---	---	---	---	1	---	---	--	1	Widowed		---	--	--	---	---	---	---	---	--	--	--	--	1	--	--	--	--	--
3	--	3	3	3	2	3	4	6	4	6	3	--	40	Total	Class IX. Business Men.	---	--	--	2	7	8	7	3	5	3	1	--	--	2	--	--	--	2
1	--	2	3	2	1	3	4	3	2	2	1	--	24	Married		---	--	--	---	1	5	5	---	5	3	1	--	--	2	--	--	--	2
2	--	1	---	1	1	---	---	2	2	3	2	--	14	Single		---	--	--	2	6	3	---	3	--	--	--	--	--	--	--	--	--	--
--	--	---	---	---	---	---	---	1	---	1	---	--	2	Widowed		---	--	--	---	---	---	2	---	--	-	--	--	--	--	--	--	--	--
1	--	7	2	---	6	1	2	3	4	2	3	1	32	Total	Class X. Professional Men.	---	--	1	3	8	2	2	3	--	1	1	2	2	3	1	—	2	1
--	--	---	1	---	5	---	---	3	2	1	1	1	14	Married		---	--	--	---	---	---	2	2	--	1	--	2	2	2	1	--	1	1
--	--	6	1	---	1	1	2	---	1	1	1	--	14	Single		---	--	1	3	8	2	---	---	--	--	--	--	--	--	--	--	--	--
1	--	1	---	---	---	---	---	---	---	---	---	--	2	Widowed		---	--	--	---	---	---	---	---	--	--	--	--	--	1	--	--	1	--
--	--	---	---	---	---	--	---	---	1	---	1	--	2	Unknown		---	--	--	---	---	---	---	1	--	--	1	--	--	--	--	--	--	--
1	5	2	2	4	5	3	4	10	4	2	4	--	46	Total	Class XI. Unoccupied.	16	4	2	5	1	3	2	3	--	--	6	--	--	--	3	--	1	--
--	2	---	---	---	1	1	1	1	1	---	1	--	8	Married		---	--	--	---	---	1	1	2	--	--	2	--	--	--	1	--	1	--
1	3	1	2	4	2	2	3	9	2	1	2	--	32	Single		16	4	2	5	1	2	---	---	--	--	1	--	--	--	1	--	--	--
--	--	---	---	---	---	---	---	---	---	---	1	--	1	Widowed		---	--	--	---	---	---	---	---	--	--	--	--	--	--	1	--	--	--
--	--	1	---	---	2	---	---	---	1	1	---	--	5	Unknown		---	--	--	---	---	---	1	1	--	--	3	--	--	--	--	--	--	--

TABLE XXIX.—CONTINUED.—DEATHS FROM CONSUMPTION, 1870.

MONTHS, 1870.																SEX AND OCCUPATION.	AGES IN PERIODS.															
January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Year 1870.	Conjugal Condition.			Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 and over.	Unknown.
17	8	30	17	20	9	19	31	28	18	21	21	1	240			Class I.	...	..	1	13	32	20	19	16	20	13	15	14	25	22	14	7	4	5
17	8	30	17	20	9	18	30	28	18	21	21	1	238	Total....			...	..	1	12	32	20	19	16	20	13	15	14	25	21	14	7	4	5
7	4	16	11	8	9	13	21	18	11	15	16	..	149	Married..			...	..	..	...	4	6	16	11	17	10	12	13	20	18	11	5	2	4
6	1	10	5	11	...	5	8	5	6	6	3	..	66	Single....		Farmers.	...	..	1	12	27	13	2	3	..	2	1	1	2	..	..	..	1	1
3	2	3	1	...	...	...	1	3	1	...	2	1	17	Widowed			...	..	..	...	...	1	1	2	..	1	2	..	3	3	2	1	1	..
1	1	1	...	1	...	...	...	2	...	...	...	..	6	Unknown			...	..	..	...	1	...	...	...	3	..	..	..	..	..	1	1	..	..
..	..	...	...	...	...	1	...	...	...	...	...	..	1	Single....		Farmers' Boys.	...	..	..	1	...	...	...	...	..	..	..	..	..	..	..	..	..	..
..	..	...	...	...	...	...	1	..	...	...	...	..	1	Married..		Gardeners.	...	..	..	...	...	...	...	...	..	..	..	..	..	1	..	..	..	..
2	2	1	1	3	3	1	3	5	4	2	...	..	27			Class II.	...	..	..	1	3	4	3	1	3	4	2	1	2	2	..	..	1	..
2	2	1	1	...	2	1	2	3	3	2	...	..	19	Total....			...	..	..	1	3	2	2	...	1	2	2	1	2	2	..	..	1	..
2	2	1	...	...	1	1	2	2	...	1	...	..	12	Married..		Carpenters.	...	..	..	...	1	1	1	...	1	2	1	1	2	1	..	..	1	..
..	..	...	1	...	...	...	...	1	2	...	...	..	4	Single....			...	..	..	1	2	1	...	...	..	..	..	..	..	..	..	..	..	..
..	..	...	...	...	1	...	...	...	1	1	...	..	3	Unknown			...	..	..	...	...	...	1	...	..	..	1	..	..	1	..	..	..	..
..	..	...	...	...	...	..	...	...	1	...	...	..	1	Married..		Joiner.	...	..	..	...	..	...	...	...	1	..	..	..	..	..	..	..	..	..

--	--	---	---	1	1	---	1	2	---	---	---	--	5	Total	Masons.	---	--	--	---	---	1	---	1	1	2	--	--	--	--	--	--	--	--
--	--	---	---	1	1	---	---	2	---	---	---	--	4	Married		---	--	--	---	---	---	---	1	1	2	--	--	--	--	--	--	--	--
--	--	---	---	---	---	---	1	---	---	---	---	--	1	Single		---	--	--	---	---	1	---	---	--	--	--	--	--	--	--	--	--	--
--	--	---	---	2	---	---	---	---	---	---	---	--	2	Married	Painters.	---	--	--	---	---	1	1	---	--	--	--	--	--	--	--	--	--	--
8	2	---	2	7	4	4	8	8	8	2	4	--	37		CLASS III.	---	--	--	2	3	8	8	8	6	--	2	6	2	1	1	--	--	--
--	--	---	---	1	---	---	---	1	1	1	1	--	5	Married	Blacksmiths.	---	--	--	---	---	1	1	---	2	--	--	1	--	--	--	--	--	--
--	--	---	---	---	---	---	---	---	---	---	1	--	1	Married	Boiler-makers.	---	--	--	---	---	---	---	---	1	--	--	--	--	--	--	--	--	--
--	--	---	---	---	---	---	1	---	---	---	---	--	1	Married	Brewers.	---	--	--	---	---	---	---	1	--	--	--	--	--	--	--	--	--	--
--	--	---	---	---	---	1	---	---	---	---	---	--	1	Married	Cabinet-makers.	---	--	--	---	---	---	---	--	--	--	--	1	--	--	--	--	--	--
-	--	---	---	---	---	---	---	---	1	---	---	--	1	Married	Carriage-makers.	---	--	--	---	---	---	---	---	--	--	--	--	--	--	1	--	--	--
--	--	---	---	1	1	1	---	---	---	---	1	--	4	Total	Coopers.	---	--	--	---	1	1	---	---	1	--	--	1	--	--	--	--	--	--
--	--	---	---	---	---	1	---	---	---	---	---	--	1	Married		---	--	--	---	---	---	--	---	1	--	--	--	--	--	--	--	--	--
--	--	---	---	1	1	---	---	---	---	---	---	--	2	Single		---	--	--	---	1	1	---	---	--	--	--	--	--	--	--	--	--	--
--	--	---	---	---	---	---	---	---	---	---	1	--	1	Unknown		---	--	--	---	---	---	---	---	--	--	--	1	--	--	--	--	--	--
--	--	---	---	---	---	---	---	1	--	---	---	--	1	Married	Dyers.	---	--	--	---	---	---	---	1	--	--	--	--	--	--	--	--	--	--
--	--	---	---	1	---	---	---	---	---	---	---	--	1	Single	Gunsmiths.	---	--	--	---	---	---	---	1	--	--	--	--	--	--	--	--	--	--
1	1	---	---	2	---	---	---	---	---	---	---	--	4	Single	Machinists.	---	--	--	1	1	1	---	1	--	--	--	--	--	--	--	--	--	--
--	--	---	---	---	---	---	---	---	---	---	1	--	1	Married	Marble-cutters.	---	--	--	---	---	---	---	---	1	--	--	--	--	--	--	--	--	--
--	--	---	2	1	---	---	1	---	---	1	---	--	5	Total	Mechanics.	---	--	--	---	---	---	1	---	--	--	--	1	2	1	--	--	--	--
--	--	---	1	1	---	---	1	---	---	1	---	--	4	Married		---	--	-	---	--	---	---	---	--	--	--	1	2	1	--	--	--	--
--	--	---	1	---	---	---	---	---	---	---	---	--	1	Unknown		---	--	--	---	---	---	1	---	--	--	--	--	--	--	--	--	--	--

TABLE XXIX.—Continued.—Deaths from Consumption, 1870.

Months, 1870.													Year 1870.	Conjugal Condition.	Sex and Occupation.	Ages in Periods.																
January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.				Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 and over.	Unknown.
															Class III.—(Continued.)																		
--	1	--	--	--	--	--	--	--	--	--	--	--	1	Married..	Millwrights.	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--
--	--	--	--	--	--	--	1	--	--	--	--	--	1	Married..	Moulders.	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--
1	--	--	--	--	--	--	--	--	--	--	--	--	1	Married..	Pattern-makers.	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	1	--	--	--	--	--	--	--	1	Single....	Plasterers.	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	1	1	--	--	--	--	--	--	--	2	Married..	Sawyers.	--	--	--	--	--	--	1	1	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	1	1	--	--	--	--	--	--	2	Married..	Stone-cutters.	--	--	--	--	--	--	--	--	1	--	1	--	--	--	--	--	--	--
--	--	--	--	--	--	1	--	1	--	--	--	--	2	Total	Tinsmiths.	--	--	--	--	1	--	--	1	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	1	--	--	--	--	1	Married..		--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	1	--	--	--	--	--	--	1	Single....		--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	1	--	--	--	1	Married..	Wagon-makers.	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--
1	--	--	--	--	--	--	--	--	--	--	--	--	1	Married..	Weavers.	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--

--	2	---	1	---	---	1	---	3	1	2	2	--	12		CLASS IV.	---	--	--	1	2	2	1	---	1	2	1	--	1	--	--	--	1	--
--	1	---	---	---	---	---	---	---	---	---	1	--	2	Total		---	--	--	1	---	---	---	---	--	--	--	--	1	--	--	--	--	--
--	--	---	---	---	---	---	---	---	---	---	1	--	1	Married..	Barbers.	---	--	--	---	---	---	---	---	--	--	--	--	1	--	--	--	--	--
--	1	---	---	---	---	---	---	---	---	---	---	--	1	Single....		---	--	--	1	---	---	---	---	--	--	--	--	--	--	--	--	--	--
--	--	---	---	---	---	---	---	1	---	---	---	--	1	Married..	Furriers.	---	--	--	---	---	---	---	---	--	1	--	--	--	--	--	--	--	--
--	--	---	1	---	---	---	---	---	---	---	1	--	2	Single....	Harness-makers.	---	--	--	---	2	---	---	---	-	--	--	--	--	--	--	--	--	--
--	1	---	---	---	---	---	---	---	---	1	---	--	2	Married..	Jewelers.	---	--	--	---	---	---	---	---	--	--	1	--	--	--	--	--	1	--
--	--	---	---	---	---	1	---	---	---	---	---	--	1	Single....	Saddlers.	---	--	--	---	---	---	1	---	--	--	--	--	--	--	--	--	--	--
--	--	---	---	---	---	---	---	2	1	1	---	--	4	Total		---	--	--	---	---	2	---	---	1	1	--	--	--	--	--	--	--	--
--	--	---	---	---	---	---	---	1	1	1	---	--	3	Married..	Shoemakers.	---	--	--	---	---	1	---	---	1	1	--	--	--	--	--	--	--	--
--	--	---	---	---	---	---	---	1	---	---	---	--	1	Single....		---	--	--	---	---	1	---	---	--	--	--	--	--	--	--	--	--	--
4	4	6	4	6	5	6	7	10	4	4	6	--	66		CLASS V.	---	--	--	6	8	6	8	9	2	4	6	5	2	3	2	--	2	3
--	--	---	---	1	---	---	1	---	---	---	---	--	2	Unknown	Ditchers.	---	--	--	---	---	---	---	---	1	--	--	--	--	1	--	--	--	--
4	2	5	4	5	5	6	6	10	4	3	6	--	60	Total		---	--	--	6	8	6	8	7	1	3	6	5	2	1	2	--	2	3
1	--	2	4	2	1	4	2	6	2	2	4	--	30	Married..		---	--	--	---	2	3	5	3	1	2	3	5	2	--	2	--	--	2
2	2	3	---	3	1	2	3	3	1	1	2	--	23	Single....	Laborers.	---	--	--	6	5	3	3	2	--	1	2	--	--	--	--	--	--	1
1	--	---	---	---	---	---	---	1	---	---	---	--	2	Widowed		---	--	--	---	---	---	---	---	--	--	--	--	--	1	--	--	1	--
--	--	---	---	---	3	---	1	---	1	---	---	--	5	Unknown		---	--	--	---	1	---	---	2	--	--	1	--	--	--	--	--	1	--
--	1	---	---	---	---	---	---	---	---	1	---	--	2	Married..	Mill-hands.	---	--	--	---	--	---	---	---	-	1	--	--	--	1	--	--	--	--
--	1	---	---	---	---	---	---	---	---	---	--	--	1	Married..	Miners.	---	--	--	---	---	---	---	1	--	--	--	--	--	--	--	--	--	--
--	--	1	---	---	---	---	---	---	---	---	---	--	1	Married..	Stewards.	---	--	--	---	---	---	---	1	-	--	--	--	--	--	--	--	--	--

TABLE XXIX.—CONTINUED.—DEATHS FROM CONSUMPTION, 1870.

MONTHS, 1870.													YEAR 1870.	CONJUGAL CONDITION.	SEX AND OCCUPATION.	AGES IN PERIODS.																
January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.				Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 and over.	Unknown.
..	..	3	3	...	1	2	1	1	...	2	2	..	15		CLASS VI.	...	..	..	1	4	1	2	2	2	1	..	1	..	..	1	..	..	..
..	..	...	...	...	1	...	...	...	...	...	...	..	1	Married..	Agents.	...	..	..	...	...	...	...	...	1	..	..	..	..	..	..	..	..	..
..	..	...	1	...	...	...	...	...	...	...	...	..	1	Single....	Butchers.	...	..	..	...	...	...	...	1	..	..	..	..	..	..	..	..	..	..
..	..	...	...	...	...	...	1	...	...	...	...	..	1	Married..	Hack-drivers.	...	..	..	...	...	...	...	1	..	..	..	..	..	..	..	..	..	..
..	..	...	1	...	...	...	...	...	...	...	...	..	1	Single....	Hostlers.	...	..	..	...	...	...	1	...	..	..	..	..	..	..	..	..	..	..
..	..	...	...	...	...	...	...	...	...	...	1	..	1	Married..	Insurance Agents.	...	..	..	...	...	1	...	...	..		..	..	..	..	..	..	..	..
..	..	...	...	...	...	1	...	...	...	1	1	..	3	Total	Lumbermen.	...	..	..	...	1	...	...	...	..	1	..	..	..	..	1	..	..	..
..	..	...	...	...	...	1	...	...	...	...	...	..	1	Married..		...	..	..	...	...	...	...	...	..	..	..	..	..	..	1	..	..	..
..	..	...	...	...	...	...	...	...	...	...	1	..	1	Single....		...	..	..	...	1	...	...	...	..	..	..	..	..	..	..	..	..	..
..	..	...	...	...	...	...	...	...	...	1	...	..	1	Widower		...	..	..	...	...	...	...	...	..	1	..	..	..	..	..	..	..	..
..	..	1	...	...	...	1	...	...	...	...	...	..	2	Married..	Musicians.	...	..	..	...	1	...	1	...	..	..	..	..	..	..	..	..	..	..
..	..	...	1	...	...	...	...	...	...	...	...	..	1	Single....	Peddlers.	...	..	..	...	1	...	...	...	..	..	..	..	..	..	..	..	..	..
..	..	...	...	...	...	...	...	1	...	...	...	..	1	Married..	R. R. Porters.	...	..	..	...	1	...	...	...	..	..	..	..	..	..	..	..	..	..
..	..	...	...	...	...	...	...	...	...	1	...	..	1	Widower	Sextons. *a*	...	..	..	...	...	...	...	...	1	..	..	..	..	..	..	..	..	..

		2											2	Total	Teamsters.				1									1							
		1											1	Married														1							
		1											1	Single					1																
								2			1		3	Total	Class VII. Sailors.						2							1							
								1					1	Married							1														
											1		1	Single							1														
								1					1	Unknown														1							
					1				1				2	Totals	Class VIII. Soldiers.						1								1						
					1								1	Single							1														
									1				1	Widower															1						
3		3	3	3	2	3	4	6	4	6	3		40		Class IX.				2	7	8	7	3	5	3	1			2						2
1					1		1	1					4	Total	Book-keepers.				1		1		1		1										
							1	1					2	Married							1				1										
1					1								2	Single					1				1												
						1							1	Married	Chandlers.															1					
												1	1	Single	Druggists.					1															
			1							1			2	Total	Grocers.						1			1											
			1										1	Married										1											
										1			1	Single							1														

a Sexton at St. Paul's Church, Detroit.

TABLE XXIX.—CONTINUED.—DEATHS FROM CONSUMPTION, 1870.

MONTHS, 1870.													YEAR 1870.	CONJUGAL CONDITION.	SEX AND OCCUPATION.	AGES IN PERIODS.																
January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.				Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 and over.	Unknow
															CLASS IX.—(Continued.)																		
--	--	---	---	---	---	1	---	---	---	1	---	--	2	Married..	Hotel-keepers.	---	--	--	---	---	---	---	---	--	1	--	--	--	--	--	--	--	1
--	--	---	---	---	---	---	---	---	---	1	---	--	1	Single....	Land Agents.	---	--	--	---	---	---	---	1	--	--	--	--	--	--	--	-	--	--
--	--	---	---	---	---	---	---	---	---	1	---	--	1	Single....	Livery-keepers.	---	--	--	---	---	---	--	1	--	--	--	--	--	--	--	--	--	--
--	--	---	---	---	---	---	---	1	---	---	---	--	1	Single....	Manufacturers.	---	--	--	---	---	1	---	---	--	--	--	--	--	--	--	--	--	--
1	--	1	1	2	---	1	3	3	3	2	1	--	18	Total	Merchants.	---	--	--	---	2	5	5	---	3	1	1	--	--	1	--	--	--	--
--	--	1	1	2	---	1	3	1	2	1	1	--	13	Married..		---	--	--	---	---	4	3	---	3	1	1	--	--	1	--	--	--	--
1	--	---	---	---	---	---	---	1	1	---	---	--	3	Single....		---	--	--	---	2	1	---	---	--	--	--	--	--	--	--	--	--	--
--	--	---	---	---	---	---	---	1	---	1	---	--	2	Widowers		---	--	--	---	---	---	2	---	--	--	--	--	--	--	--	--	--	--
--	--	---	---	1	---	---	---	---	---	---	---	--	1	Single....	Merchants' Clerks.	---	--	--	---	1	---	---	---	--	--	--	--	--	--	--	--	--	--
--	--	1	---	--	---	---	---	---	---	---	---	--	1	Married..	Merchants, Commission.	---	--	--	---	1	---	---	---	--	--	--	--	--	--	--	--	--	--
--	--	1	---	---	---	---	---	---	---	---	---	--	1	Single....	News Agents.	---	--	--	---	1	---	---	---	--	--	--	--	--	--	--	--	--	--
--	--	---	1	---	---	---	---	---	---	---	---	--	1	Married..	Overseers.	---	--	--	---	---	---	---	---	--	--	--	--	--	--	--	--	--	1

--	--	---	---	---	1	--	---	---	---	---	---	--	1	Married..	Postmasters.	---	--	--	---	---	---	1	---	--	--	--	--	--	--	--	--	--	--	--
--	--	---	---	---	---	---	---	1	---	---	1	--	2	Total....	Salesmen.	---	--	--	1	---	---	---	---	1	--	--	--	--	--	--	--	--	--	--
--	--	---	---	---	---	---	---	1	---	---	---	--	1	Married..		--	--	--	---	---	---	---	---	1	--	--	--	--	--	--	--	--	--	--
--	--	---	---	---	---	---	---	---	---	---	1	--	1	Single....		---	--	--	1	---	---	---	---	--	--	--	--	--	--	--	--	--	--	--
1	--	---	---	---	---	---	---	---	---	---	---	--	1	Married..	Saloon-keepers.	---	--	--	---	---	---	1	---	--	--	--	--	--	--	--	--	--	--	--
--	--	---	---	---	---	---	---	--	1	---	---	--	1	Single....	Tobacconists.	---	--	--	---	1	---	---	---	--	--	--	--	--	--	--	--	--	--	--
1	--	7	2	---	6	1	2	8	4	2	8	1	32		CLASS X.	---	--	1	8	8	2	2	8	--	1	1	2	2	8	1	--	2	1
--	--	1	---	---	---	---	---	---	1	---	---	--	2	Total....	Artists.	---	--	--	1	---	---	---	1	--	--	--	--	--	--	--	--	--	--
--	--	1	---	---	---	---	---	---	---	---	---	--	1	Single....		---	--	--	1	---	---	---	---	--	--	--	--	--	--	--	--	--	--	--
--	--	---	---	---	---	---	---	---	1	---	---	--	1	Unknown		---	--	--	---	---	---	---	1	--	--	--	--	--	--	--	--	--	--	--
--	--	1	---	---	8	1	1	---	1	1	1	--	9	Total....	Clerks.	---	--	--	---	6	1	1	1	--	--	--	--	--	--	--	--	--	--	--
--	--	---	---	---	2	---	---	---	---	---	---	--	2	Married..		---	--	--	---	---	---	1	1	--	--	--	--	--	--	--	--	--	--	--
--	--	1	---	---	1	1	1	---	1	1	1	--	7	Single....		---	--	--	---	6	1	---	---	--	--	--	--	--	--	--	--	--	--	--
--	--	---	---	---	---	---	---	1	---	---	---	--	1	Married..	Dentists.	---	--	--	---	--	---	---	---	--	--	--	1	--	--	--	--	--	--	--
--	--	---	---	---	---	---	---	---	---	1	---	--	1	Married..	Justice of the Peace.	---	--	--	---	---	---	---	---	--	--	--	--	--	--	--	--	1	--
--	--	1	1	---	1	---	---	1	1	---	---	--	5	Total....	Lawyers.	---	--	--	---	1	---	1	---	--	1	--	--	1	1	--	--	--	--	--
--	--	---	1	---	1	---	---	1	1	---	---	--	4	Married..		---	--	--	---	---	---	1	---	--	1	--	--	1	1	--	--	--	--	--
--	--	1	---	---	---	---	---	---	---	---	---	--	1	Single....		---	--	--	---	1	---	---	--	--	--	--	--	--	--	--	--	--	--	--
--	--	1	---	---	---	---	---	---	---	---	---	--	1	Single....	Law Students.	---	--	--	---	1	---	---	---	--	--	--	--	--	--	--	--	--	--	--

TABLE XXIX.—CONTINUED.—DEATHS FROM CONSUMPTION, 1870.

MONTHS, 1870.													YEAR 1870.	CONJUGAL CONDITION.	SEX AND OCCUPATION.	AGES IN PERIODS.																
January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.				Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 and over.	Unknown.
															CLASS X.—(Continued.)																		
--	--	1	--	--	2	--	1	--	--	--	2	--	6	Total	Ministers.	--	--	--	1	--	--	--	--	--	--	1	1	1	2	--	--	--	--
--	--	--	--	--	2	--	--	--	--	--	1	--	3	Married		--	--	--	--	--	--	--	--	--	--	--	1	1	1	--	--	--	--
--	--	--	--	--	--	--	1	--	--	--	--	--	1	Single		--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	1	--	--	--	--	--	--	--	--	--	--	1	Widower		--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	1	--	1	Unknown		--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	1	--	--	--	--	1	Married	Notaries Public.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	1	1	Married	Physicians.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1
--	--	--	1	--	--	--	--	--	--	--	--	--	1	Single	Scholars.	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	1	--	--	--	--	--	--	--	--	--	--	1	Single	Students.	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--
1	--	--	--	--	--	--	--	--	--	--	--	--	1	Widower	Surveyors.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--
--	--	1	--	--	--	--	--	--	1	--	--	--	2	Total	Teachers.	--	--	--	1	--	--	--	1	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	1	--	--	--	1	Married		--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--
--	--	1	--	--	--	--	--	--	--	--	--	--	1	Single		--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--

1	5	2	2	4	5	3	4	10	4	2	4	..	46	Total	Class XI. Unoccupied.	16	4	2	5	1	3	2	3	..	..	6	..	..	..	3	..	1	..
..	2	...	...	...	1	1	1	1	1	...	1	..	8	Married		...	..	..	...	...	1	1	2	..	..	2	..	..	..	1	..	1	..
1	3	1	2	4	2	2	3	9	2	1	2	..	32	Single		16	4	2	5	1	2	...	...	..	..	1	..	..	..	1	..	..	..
..	..	...	...	...	...	...	...	...	...	...	1	..	1	Widower		...	..	..	...	...	...	...	...	..	..	..	..	..	..	1	..	..	..
..	..	1	...	...	2	...	...	...	1	1	...	..	5	Unknown		...	..	..	...	...	...	1	1	..	..	3	..	..	..	..	..	..	..
9	10	18	18	17	16	19	19	16	21	15	23	1	202		Class XII.—(Females.)	8	4	4	24	30	29	26	19	8	9	11	7	5	3	9	1	3	2
..	..	...	...	...	...	...	1	...	...	...	...	..	1	Single	Artists.	...	..	..	...	...	...	1	...	..	..	..	..	..	..	..	..	..	..
..	..	...	...	...	1	...	...	...	...	...	...	..	1	Married	Blacksmiths' Wives.	...	..	..	...	...	...	1	...	..	..	..	..	..	..	..	..	..	..
..	..	...	...	...	...	...	1	...	...	...	...	..	1	Married	Cooks.	...	..	..	...	...	1	...	...	..	..	..	..	..	..	..	..	..	..
..	..	1	...	...	...	...	...	...	...	...	...	..	1	Single	Dress-makers.	...	..	..	1	...	...	...	...	..	..	..	..	..	..	..	..	..	..
..	..	1	2	2	1	...	1	...	2	2	5	..	16	Total	Farmers.	...	..	..	3	3	...	2	2	1	..	2	..	..	..	3	..	..	..
..	..	1	...	...	...	...	1	...	1	1	4	..	8	Married		...	..	..	1	2	...	2	1	1	..	1	..	..	..	..	..	..	..
..	..	...	1	1	...	...	...	...	...	1	1	..	4	Single		...	..	..	2	1	...	...	...	..	..	..	..	..	..	1	..	..	..
..	..	...	1	1	1	...	...	...	1	...	...	..	4	Widowed		...	..	..	...	...	...	...	1	..	..	1	..	..	..	2	..	..	..
..	..	...	...	...	...	...	1	...	...	...	...	1	2	Single	Farmers' Daughters.	...	..	..	1	...	...	1	...	..	..	..	..	..	..	..	..	..	..
..	2	...	2	...	3	1	...	1	3	...	4	..	16	Total	Farmers' Wives.	...	..	..	1	3	2	2	3	1	2	..	..	1	1	..	..	..	..
..	2	...	2	...	3	1	...	1	2	...	4	..	15	Married		...	..	..	1	3	2	2	3	1	2	..	..	1	..	..	..	..	..
..	..	...	...	...	...	...	...	...	1	...	...	..	1	Widowed		...	..	..	...	...	...	...	...	..	..	..	..	..	1	..	..	..	..
1	1	7	5	4	4	10	2	4	7	7	2	..	54	Total	House-keepers.	...	..	..	2	5	10	9	7	2	4	4	1	4	1	3	1	1	..
1	..	6	5	4	2	5	2	4	6	5	2	..	42	Married		...	..	..	...	4	10	8	7	1	3	4	1	4	..	..	..	..	..
..	1	...	...	...	1	1	...	...	...	1	...	..	4	Single		...	..	..	2	1	...	...	...	..	..	..	..	..	1	..	..	..	..
..	..	1	...	...	1	4	...	...	1	1	...	..	8	Widowed		...	..	..	...	...	...	1	...	1	1	..	..	..	..	3	1	1	..

TABLE XXIX.—Continued.—Deaths from Consumption, 1870.

Months, 1870.													Year 1870.	Conjugal Condition.	Sex and Occupation.	Ages in Periods.																
January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.				Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 and over.	Unknown.
															Class XII.—(Continued.)																		
..	1	1	...	2	...	2	...	...	1	1	2	..	10	Married..	House-wives.	...	..	..	1	2	2	1	1	1	1	1	..	..	..	..	..	..	..
..	..	...	...	...	...	...	...	1	1	...	...	..	2	Total	House-work.	...	..	..	...	1	1	...	...	..	..	..	..	..	..	..	..	..	..
..	..	...	...	...	...	...	...	1	...	...	...	..	1	Married..		...	..	..	...	1	...	...	...	..	..	..	..	..	..	..	..	..	..
..	..	...	...	...	...	...	...	...	1	...	...	..	1	Single....		...	..	..	...	...	1	..	...	..	..	..	..	..	..	..	..	..	..
..	..	1	1	...	1	...	...	2	...	...	1	..	6	Total.....	Laborers.	...	..	..	...	1	2	2	...	..	..	..	..	..	..	..	..	..	1
..	..	...	1	...	...	...	...	1	...	...	1	..	3	Married..		...	..	..	...	...	1	2	...	..	..	..	..	..	..	..	..	..	..
..	..	1	...	...	1	...	...	1	...	...	...	..	3	Single....		...	..	..	..	1	1	...	...	..	..	..	..	..	..	..	..	..	1
..	..	...	...	...	...	...	...	...	1	...	...	..	1	Married..	Matrons.	...	..	..	...	...	1	...	...	..	..	..	..	..	..	..	..	..	..
..	..	1	...	...	1	...	...	1	...	1	...	..	4	Total	Milliners.	...	..	..	...	2	...	2	...	..	..	..	..	..	..	..	..	..	..
..	..	1	...	...	...	...	...	...	...	...	...	..	1	Married..		...	..	..	...	...	...	1	...	..	..	..	..	..	..	..	..	..	..
..	..	...	...	...	1	...	...	1	...	1	...	..	3	Single....		...	..	..	...	2	...	1	...	..	..	..	..	..	..	..	..	..	..
..	..	...	1	...	...	...	...	...	...	...	...	..	1	Single....	Musicians.	...	..	..	...	...	...	...	...	..	..	..	..	..	..	..	..	1	..
..	..	...	...	...	1	...	...	...	...	...	...	..	1	Married..	Music Teachers.	...	..	..	...	...	1	...	...	..	..	..	..	..	..	..	..	..	..

--	--	---	---	1	---	---	---	---	---	---	---	--	1	Single....	Paupers.	---	--	--	---	---	---	1	---	--	--	--	--	--	--	--	--	--	--	--
--	--	---	---	---	---	---	2	---	---	---	---	--	2	Single....	Scholars.	---	1	1	---	---	---	---	---	--	--	--	--	--	--	--	--	--	--	--
--	--	1	---	---	---	---	---	1	1	---	---	--	3	Total	Seamstresses.	---	--	--	2	---	---	---	---	--	1	--	--	--	--	--	--	--	--	--
--	--	1	---	---	---	---	---	---	1	---	---	--	2	Married..		---	--	--	1	---	---	---	---	--	1	--	--	--	--	--	--	--	--	--
--	--	---	---	---	---	---	---	1	---	---	---	--	1	Single ...		---	--	--	1	---	---	---	---	--	--	--	--	--	--	--	--	--	--	--
1	--	1	---	1	---	2	2	---	---	---	---	--	7	Total	Servants.	---	--	--	1	1	2	---	2	--	--	--	1	--	--	--	--	--	--	--
--	--	---	---	---	---	1	---	---	---	---	---	--	1	Married..		--	--	--	---	---	---	---	1	--	--	--	--	--	--	--	--	--	--	--
--	--	1	---	1	---	1	2	---	---	---	---	--	5	Single....		---	--	--	1	1	2	---	1	--	--	--	--	--	--	--	--	--	--	--
1	--	---	---	---	---	---	---	---	---	---	---	--	1	Widowed		---	--	--	---	---	---	---	---	--	--	--	1	--	--	--	--	--	--	--
--	--	---	---	---	---	---	1	---	---	---	---	--	1	Married..	"Sort of a Doctor's Wife."	---	--	--	---	---	---	---	---	1	--	--	--	--	--	--	--	--	--	--
--	--	---	---	---	---	---	---	---	---	---	1	--	1	Single....	Tailoresses.	---	--	--	---	1	---	---	---	--	--	--	--	--	--	--	--	--	--	--
--	--	1	1	2	2	---	---	---	---	---	---	--	6	Total	Teachers.	---	--	--	---	4	---	---	1	--	--	--	1	--	--	--	--	--	--	--
--	--	1	1	1	1	---	---	---	---	---	---	--	4	Single ...		---	--	--	---	3	---	---	1	--	--	--	--	--	--	--	--	--	--	--
--	--	---	---	1	---	---	---	---	---	--	---	--	1	Widowed		---	--	--	---	1	---	---	---	--	--	--	--	--	--	--	--	--	--	--
--	--	---	---	---	1	---	---	---	---	---	---	--	1	Married..	Weavers.	---	--	--	---	---	---	---	---	--	--	--	1	--	--	--	--	--	--	--
7	6	3	6	5	2	4	8	6	5	4	8	--	64	Total	Unoccupied.	8	3	3	12	7	7	4	3	2	1	4	4	--	1	3	--	1	1	
1	3	1	1	---	---	2	1	2	3	2	2	--	18	Married..		---	--	--	---	1	4	4	2	--	1	2	2	--	1	1	--	--	--	
4	2	2	5	4	2	2	5	2	1	2	5	--	36	Single ...		8	3	2	12	6	2	---	1	1	--	--	--	--	--	--	--	1	--	
2	1	---	---	---	---	---	2	---	---	---	---	--	5	Widowed		---	--	--	---	---	1	---	---	--	--	1	2	--	--	1	--	--	--	
--	--	---	---	1	---	---	---	2	1	---	1	--	5	Unknown		---	--	1	---	---	---	---	---	1	--	1	--	--	--	1	--	--	1	

Table XXIX. is similar to Table XX. in last report. It is greatly to be regretted that in the late U. S. Census, information concerning the proportions of the population married and single at the different ages, was not collected. Notwithstanding we have not at present similar knowledge concerning the population, with which to compare it, this table is continued, in nearly the original form devised for last report, with the hope that at no distant time such statistics concerning the inhabitants may be collected; and the table is continued more especially for the reason that it exhibits other statements besides those of marital relations.

EXHIBIT R.

The Average Age of the Inhabitants of Michigan, of Both Sexes, of Each Sex, and the Difference between the Sexes, for all Living June 1st, 1870, and all returned as having Died during the year ending June 1st, 1870, as compiled from the U. S. Census of that date; for all returned as having Died from all causes, and all returned as having Died from Consumption, during the year ending Dec. 31st, 1870, as shown by the Registration Returns; for all Living aged Twenty and over, as per Census; and also for all aged Twenty and over whose Ages and Occupations were stated in the Registration Returns of Deaths for the year 1870.

	Average Age in Years and 100ths of a Year.				Year Ending:
	Total.	Males.	Females.	Excess of Males.	
Deaths, as per Census	24.79	25.17	24.39	.78	June 1st, 1870.
Living, as per Census	24.32	24.91	23.68	1.23	June 1st, 1870.
Deaths, as shown by Registration Returns	23.50	24.05	22.89	1.16	Dec. 31st, 1870.
Deaths from Consumption, by Reg. Returns	34.95	36.89	33.14	3.75	Dec. 31st, 1870.
All Living Aged 20 and over, per Census	38.23	38.61	37.80	.81	June 1st, 1870.
All Aged 20 and over, whose occupations were stated in Registration Ret's of Deaths	51.01	52.45	45.96	6.49	Dec. 31st, 1870.

Rule used for obtaining the average age: Multiply the number at each age by the age; add the results, and then add one-half month for each person under one year, and one-half year for each person over one year of age, and divide the product by the whole number of inhabitants, or persons dead, as the case may be, less the number at unknown ages.

TABLE XXX.

Exhibiting, by Classified Occupations, the Number, with the Aggregate and Average Ages of all whose Occupations and Ages were returned, of those Aged Twenty Years and Over; One-half of a Year added to Age of Each Person, in place of Months and Days, excluded.

Class.	Occupation.	No. of Persons.	Age.	
			Aggregate.	Average.
	All specified occupations	2,527	128,920.50	51.01
I.	Cultivators of the Earth	1,092	61,000.00	55.86
II.	Active Mechanics Abroad	119	6,219.50	52.26
III.	Active Mechanics in Shops	138	7,104.00	51.47
IV.	Inactive Mechanics in Shops	65	3,657.50	56.26
V.	Laborers—No Special Trade	221	9,955.50	45.04
VI.	Agents, Laborers Abroad, etc.	57	2,523.50	44.26
VII.	Seafaring Men	26	1,050.00	40.38
VIII.	Soldiers	4	168.00	42.00
IX.	Business Men	141	6,364.50	45.13
X.	Professional Men, etc.	53	2,636.50	49.74
XI.	Unoccupied	51	2,503.50	49.08
XII.	Females	560	25,738.00	45.96
I.	Cultivators of the Earth	1,092	61,000.00	55.86
	Farmers *a*	1,084	60,578.00	55.87
	Gardeners	7	378.50	54.07
	Horticulturists	1	43.50	43.50
II.	Active Mechanics Abroad	119	6,219.50	52.26
	Brick-makers	1	58.50	53.50
	Carpenters	72	3,689.00	51.23
	Joiners	6	341.00	56.83
	Brick-masons	1	82.50	82.50

a Includes one, a distiller 40 years, afterwards a farmer, aged 105.

TABLE XXX.—CONTINUED.

Class.	Occupation.	No. of Persons.	Age.	
			Aggregate.	Average.
II.	Active Mechanics Abroad—(Continued).			
	Stone-masons	3	189.50	63.16
	Masons	25	1,436.50	57.46
	Painters	8	319.00	39.87
	Ship-builders	1	43.50	43.50
	Ship-carpenters	1	32.50	32.50
	Whip-sawyers	1	27.50	27.50
III.	Active Mechanics in Shops	138	7,104.00	51.47
	Bakers	1	78.50	78.50
	Basket-makers	1	55.50	55.50
	Blacksmiths	31	1,828.50	58.98
	Boiler-makers	3	98.50	32.83
	Brewers	2	81.00	40.50
	Cabinet-makers	4	191.00	47.75
	Carriage and Wagon-makers	4	239.00	59.75
	Cooks	2	94.00	47.00
	Coopers	13	698.50	53.73
	Dyers	2	84.00	42.00
	Gunsmiths	2	138.00	69.00
	Machinists	10	465.00	46.50
	Manufacturers of Picture Frames	1	30.50	30.50
	Marble-cutters	1	42.50	42.50
	Mechanics	13	727.50	55.96
	Millers	13	622.50	47.88
	Millwrights	4	252.00	63.00
	Moulders	4	153.00	38.25
	Paper-makers	1	55.50	55.50
	Pattern-makers	1	38.50	38.50
	Planers	1	21.50	21.50
	Plasterers	1	38.50	38.50
	Sawyers	7	264.50	37.78

TABLE XXX.—CONTINUED.

Class.	Occupation.	No. of Persons.	Age.	
			Aggregate.	Average.
III.	Active Mechanics in Shops—(Continued).			
	Stone-cutters	4	166.00	41.50
	Stove Mounters	1	22.50	22.50
	Tinkers	1	63.50	63.50
	Tinsmiths	3	117.50	39.16
	Trunk-makers	1	58.50	58.50
	Weavers	4	270.00	67.50
	Wheelwrights	2	108.00	54.00
IV.	Inactive Mechanics in Shops	65	3,657.50	56.26
	Barbers	3	136.50	45.50
	Bookbinders	1	44.50	44.50
	Cigar-makers	2	90.00	45.00
	Furriers	2	121.00	60.50
	Jewelers	5	287.50	57.50
	Printers	3	103.50	34.50
	Saddle and Harness Makers	5	159.50	31.90
	Shoemakers	31	1,848.50	59.62
	Stewards	1	38.50	38.50
	Tailors	11	803.50	73.04
	Tobacconists	1	24.50	24.50
V.	Laborers—No Special Trade	221	9,955.50	45.04
	Ditchers	3	152.50	50.83
	Laborers	196	8,975.00	45.79
	Men of all Work	1	62.50	62.50
	Miners	14	501.00	35.78
	Mill-hands	3	149.50	49.83
	Raftsmen	4	115.00	28.75
VI.	Agents, Laborers Abroad, etc.	57	2,528.50	44.26
	Agents	2	86.00	43.00
	Auctioneers	1	42.50	42.50

TABLE XXX.—CONTINUED.

Class.	Occupation.	No. of Persons.	Age.	
			Aggregate.	Average.
VI.	Agents, Laborers Abroad, etc.—(Continued).			
	Brakemen	2	50.00	25.00
	Butchers	6	307.00	51.16
	Draymen	1	54.50	54.50
	Drovers	1	22.50	22.50
	Engineers	4	183.00	45.75
	Foremen on Railroads	1	23.50	23.50
	Hack-drivers	1	39.50	39.50
	Hostlers	1	38.50	38.50
	Hucksters	1	43.50	43.50
	Lime-burners	1	39.50	39.50
	Liverymen	5	244.50	48.90
	Lumbermen	11	525.50	47.77
	Milkmen	1	65.50	65.50
	Musicians	3	115.50	38.50
	News Agents	1	21.50	21.50
	Peddlers	2	91.00	45.50
	Performers	1	30.50	30.50
	Porter on Railroad	1	23.50	23.50
	Sextons	2	98.00	49.00
	Teamsters	7	331.50	47.35
	Tin-peddlers	1	51.50	51.50
VII.	Seafaring Men	26	1,050.00	40.38
	Captains at Sea	1	47.50	47.50
	Fishermen	3	173.50	57.83
	Mates on Vessels	1	20.50	20.50
	Sailors	21	808.50	38.50
VIII.	Soldiers	4	168.00	42.00
	Enlisted Men	4	168.00	.....
IX.	Business Men	141	6,364.50	45.18

TABLE XXX.—CONTINUED.

Class.	Occupation.	No. of Persons.	Age. Aggregate.	Age. Average.
IX.	Business Men—(Continued).			
	Bankers	1	62.50	62.50
	Book-keepers	7	287.50	41.07
	Brokers	1	57.50	57.50
	Builders	3	168.50	56.16
	Chandlers	2	123.00	61.50
	Clerks	22	770.00	35.00
	Clothiers	1	50.50	50.50
	Commission Merchants	1	24.50	24.50
	Druggists	4	173.00	43.25
	Express Agents	1	65.50	65.50
	Foundrymen	3	155.50	51.83
	Grocers	11	499.50	45.40
	Hotel-keepers	10	535.00	53.50
	Insurance Agents	3	133.50	44.50
	Justices of the Peace	3	224.50	74.83
	Liquor Dealers	1	40.50	40.50
	Lumber Dealers	1	59.50	59.50
	Lumber Merchants	1	62.50	62.50
	Manufacturers	1	26.50	26.50
	Merchants	44	1,902.00	43.22
	Notaries Public	1	72.50	72.50
	Post-masters	2	88.00	44.00
	Public Works	2	96.00	48.00
	Pump Manufacturers	1	38.50	38.50
	Real Estate Agents	3	146.50	48.83
	Salesmen	1	44.50	44.50
	Saloon-keepers	9	379.50	42.16
	Woolen Manufacturers	1	77.50	77.50
X.	Professional Men, etc.	53	2,636.50	49.74
	Artists	1	37.50	37.50

TABLE XXX.—CONTINUED.

Class.	Occupation.	No. of Persons.	Age.	
			Aggregate.	Average.
X.	Professional Men, etc.—(Continued).			
	Clergymen	8	495.00	61.87
	Dentists	4	203.00	50.75
	Generals	1	49.50	49.50
	Government Surveyors	1	21.50	21.50
	Lawyers	12	674.00	56.16
	Missionaries *a*	1	44.50	44.50
	Physicians	12	668.00	55.66
	Reporters	1	38.50	38.50
	Students	4	93.00	23.25
	Surveyors	2	91.00	45.50
	Teachers	6	221.00	36.83
XI.	Unoccupied	51	2,508.50	49.08
	Gentlemen	2	123.00	61.50
	Idiots	1	37.50	37.50
	Paupers	2	171.00	85.50
	Retired	4	266.00	66.50
	Unoccupied	42	1,906.00	45.38
XII.	Females	560	25,738.00	45.96
	Artists	1	34.50	34.50
	Blacksmiths' Wives	1	31.50	31.50
	Boarding	1	25.50	25.50
	Clothiers	1	63.50	63.50
	Cooks	2	69.00	34.50
	Doctors' Wives	3	126.50	42.16
	Doctresses	1	63.50	63.50
	Domestics	5	242.50	48.50
	Dressmakers	2	73.00	36.50
	Farmers	82	4,171.00	50.86
	Farmers' Daughters	1	32.50	32.50
	Farmers' Mothers	2	133.00	66.50

a Missionary, 14 years in Turkey.

TABLE XXX.—CONTINUED.

Class.	Occupation.	No. of Persons.	Age.	
			Aggregate.	Average.
XII.	Females, (Continued).			
	Farmers' Wives	67	2,348.50	35.05
	House-keepers	171	8,002.50	46.79
	House-wives	39	1,843.50	47.26
	House-workers	10	485.00	48.50
	Hucksters	1	50.50	50.50
	Joiners' Wives	1	85.50	85.50
	Knitters	1	85.50	85.50
	Laborers	18	701.50	58.96
	Landladies	1	44.50	44.50
	Mat makers	1	68.50	68.50
	Matrons	1	26.50	26.50
	Merchants' Wives	1	24.50	24.50
	Milliners	10	318.00	31.80
	Ministers' Wives	1	62.50	62.50
	Musicians	1	81.50	81.50
	Music Teachers	1	28.50	28.50
	Retired	1	66.50	66.50
	Paupers	2	119.00	59.50
	Seamstresses	3	97.50	32.50
	Servants	7	219.50	31.35
	Spinsters	1	40.50	40.50
	Students	1	20.50	20.50
	Tailoresses	3	134.50	44.83
	Teachers	10	317.00	31.70
	Unoccupied	106	5,218.00	49.22
	Washers	1	50.50	50.50
	Weavers	3	181.50	60.50

TABLE XXXI.

Exhibiting for the Year, for Each Month, and an Average Month, during the Year 1870, the Mean Heighth and Range of Barometer; the Direction of the Prevailing Winds; the Relative Humidity; the Per Cent of Cloudiness; the Number of Days on which it Rained, or Snowed; and the Depth of Rain and Melted Snow in Inches; at the Agricultural College, near Lansing, Michigan.

MONTHS.	Barometer—Reduced to 32° Fahrenheit—Mean.	Range of Barometer.	Days of Prevailing Winds.								Relative Humidity, or Per Cent of Saturation—Average.	Per Cent of Cloudiness of Sky—Average.	Number of Days on which it Rained or Snowed.	Rain and Melted Snow in Inches.
			North.	Northeast.	East.	Southeast.	South.	Southwest.	West.	Northwest.				
Year	28.876	1.366	3	46	22	16	4	157	74	25	81	58	130	37.757
January	28.867	1.224	.....	4	.....	2	.....	18	6	1	85	80	16	1.930
February	28.807	1.215	.....	2	2	.....	3	6	11	4	84	65	8	1.208
March	28.845	1.161	.....	3	7	4	.....	4	8	4	84	75	14	3.007
April	28.902	.688	1	7	1	2	.....	9	7	2	76	50	10	2.020
May	28.857	.727	1	3	6	2	.....	13	2	1	73	39	9	1.160
June	28.880	.674	.....	6	2	1	.....	16	3	1	77	42	11	7.270
July	28.836	.490	.....	2	.....	1	.....	20	5	3	79	48	14	3.024
August	28.890	.641	.....	3	1	1	.....	21	4	.....	81	50	8	4.530
September	29.022	.497	1	7	.....	.....	1	13	.....	5	88	51	12	2.846
October	28.939	.808	.....	4	.....	1	.....	16	5	1	85	66	8	2.292
November	28.908	.783	.....	2	1	2	.....	9	11	2	80	54	6	.905
December	28.772	1.225	.....	3	2	.....	.....	12	12	1	94	79	14	2.570
Monthly Average	28.876	.844	.25	3.83	1.83	1.33	.33	13.08	6.16	2.08	81	58	10.83	3.146

TABLE XXXII.

Exhibiting the Mean Temperature; the Highest, and Lowest Temperature; the Monthly Range; the Mean Daily Range; and the Mean Range from Day to Day; and the Greatest Rise or Fall of Thermometer in Twenty-four Hours; for each Month of the Year 1870, at the Agricultural College near Lansing, Michigan.

MONTHS.	THERMOMETER—FAHRENHEIT.										
	THREE OBSERVATIONS DAILY—AT 7 A. M., 2 P. M., & 9 P. M.				SELF-REGISTERING.			MEAN RANGE.		GREATEST CHANGE IN TWENTY-FOUR HOURS.	
	Mean.	Highest.	Lowest.	Range.	Highest.	Lowest.	Range.	Daily. *a*	From Day to Day. *b*	Degrees of Rise and Fall.	Day and Month.
YEAR.....	49.10°	99°	13°	112°	99°	-28°	127°	17.11°	19.03°	R. 41°	Feb. 23.
January...	25.37°	46°	2°	44°	46°	-17°	63°	13.41°	15.70°	F. 34°	17
February..	24.25	44	-13	57	45	-28	73	15.46	17.89	R. 41	23
March.....	30.28	50	-4	54	64	-15	79	14.58	16.48	R. 40	18
April.....	50.39	83	30	53	83	18	65	17.50	19.96	F. 35	24
May.....	64.32	88	44	44	88	29	59	20.93	23.22	R.&F. 34	13
June.....	70.87	99	49	50	99	42	57	19.50	21.56	F. 32	19
July.....	74.40	93	58	35	93	44	49	17.32	19.32	R. 30	3
August....	70.11	90	51	39	92	40	52	18.22	19.06	R. 34	30
September	63.66	90	41	49	90	32	58	22.96	25.03	R. 38	21
October...	52.45	73	28	45	73	22	51	16.45	18.29	R. 35	23
November.	38.40	69	13	56	69	10	59	19.96	21.36	F. 39	2
December.	24.80	52	-11	63	52	-15	67	9.03	10.58	R. 23	29

a Observed, day of 14 hours—three observations,—at 7 A. M., 2 P. M., and 9 P. M.
b From day to day,—2 P. M. to 2 P. M.

The material for Tables XXXI. and XXXII. was taken from the Report of the State Board of Agriculture for the year 1870. The observations, upon which the statements are based, were made by Prof. R. C. Kedzie, M. D., at the Agricultural College, near Lansing.

TABLE XXXIII.

Exhibiting the Mean Temperature, the Highest, and Lowest Temperature, the Monthly Range, the Mean Daily Range, and the Greatest Change in Twenty-four Hours; also the Prevailing Winds, the Relative Humidity, the Rain and Melted Snow, and the Depth of Snow, in inches, for each Month of the Year 1870, at Monroe, Michigan.

MONTHS, 1870.	THERMOMETER—FAHRENHEIT. a															Prevailing Winds.	Relative Humidity.—Unity as Maximum.	Rain & Melted Snow, in Inches.	Snow in Inches.
	Mean.	Highest.		Lowest.		Range for Mo's and Year.	Mean Range.		Greatest Range in One Day.										
		Day of the Month.	Degrees.	Day of Month.	Degrees.		Daily. a	From Day to Day. b	Day of Month.	First Observ. Hour.	First Observ. Degrees	Last Observ. Hour.	Last Observ. Degrees	Degrees of Rise or Fall.					
Year	52.47°	July 5.	99°	Feb. 21.	-7°	106°	12.16°	14.80°	April 8.	7 P. M.	79°	9 P. M.	40°	39° F.	--------		.4	33.76	50
January	28.54°	22	45°	9	0°	45°	10.16°	13.45°	17	7 A. M.	44°	9 P. M.	18°	26° F.	N. W.		.4	3.27	11
									8	7 A. M.	20	2 P. M.	42	22 R.					
February	27.81	11	48	21	-7	55	11.96	14.75	21	--------	-7	--------	15	22 R.	N. W.		.2	·37	7
									16	--------	8	--------	29	21 R.					
March	32.79	20	46	16	8	38	9.35	10.93	18	2 P. M.	45	9 P. M.	24	21 F.	N.N.W.		.3	1.28	8
April	52.64	27	82	16	34	48	13.40	17.73	8	7 A. M.	79	9 P. M.	40	39 F.	N.		.2	1.08	----
May	63.86	3	88	11	41	47	14.57	18.09	4	7A.M.	56	2 P. M.	84	28 R.	W.		.3	1.30	----
										2P.M.	84	9 P. M.	56	28 F.					
June	73.60	28	98	11	56	42	12.96	14.70	20	2 P. M.	88	9 P. M.	64	24 F.	N. W.		.6	4.55	----
July	78.26	5	99	29	62	37	11.77	14.48	4	7 A. M.	69	2 P. M.	90	21 R.	--------		1.0	9.13	----
August	77.17	24	98	13	60	38	13.41	17.03	5	2 P. M.	94	9 P. M.	72	22 F.	--------		.3	2.20	----
September	71.23	8	88	20	58	30	12.63	14.66	4	2 P. M.	78	9 P. M.	58	20 F.	--------		.4	2.26	----
October	51.14	16	82	31	38	44	12.00	14.64	21	7 A. M.	44	2 P. M.	66	22 R.	S. W.		.5	3.73	----
November	43.26	8	76	18	28	48	13.63	16.20	1	7 A. M.	33	2 P. M.	65	32 R.	S.		.5	3.60	10
December	29.34	2	52	24	-5	57	10.22	11.03	25	7 A. M.	-2	9 P. M.	18	20 R.	S. W.		.3	1.04	14
Average	52.47	--------	75	--------	33	44	12.17	14.80	--------	--------	------	--------	61	------	--------		.4	2.81	----

a Observed day of 14 hours—three observations,—at 7 A. M., 2 P. M., and 9 P. M. *b* Mean Range from day to day,—2 P. M. to 2 P. M.

TABLE XXXIV.

Showing the Mean Temperature, the Highest and Lowest Temperature, the Monthly Range, the Mean Daily Range, and the Greatest Change in Twenty-four Hours; and also the Days of Prevailing Winds, for Each Month of the Year 1870, at Ontonagon, Michigan.

Year and Months, 1870.	Three Observations Daily,—at 7 A. M., 2 P. M., and 9 P. M.											
	Thermometer—Fahrenheit.								Days of Prevailing Winds. *a*			
						Greatest Change in 24 Hours.						
	Mean.	Highest.	Lowest.	Range.	Mean Daily Range.	Degrees of Rise or Fall of Thermometer.	Day of Month.	Hour of Observation.	North and East.	East and South.	South and West.	West and North.
Year	44.33°	90°	-24°	114°	10.1°	34°	Feb. 12 May 16	Noon Noon	79⅓	27	196⅔	55
January	15.70	32	-14	46	8.2	30	17th	Eve	10⅓	1⅓	13	4⅓
February	14.97	40	-24	64	13.1	34	12th	Noon	4	4⅓	17	2⅔
March	23.60	46	-14	60	16.2	28	15th & 19th	Morn	8	5⅔	13⅓	2
April	43.40	72	30	42	13.5	30	15th	Noon	8⅔	1	16	4⅓
May	58.44	90	46	44	12.3	34	16th	Noon	8⅓	4⅔	14⅓	3⅔
June	67.44	90	48	42	7.9	30	22d	Noon	6⅔	0	18⅔	4⅔
July	69.00	90	56	34	10.8	24	8th	Noon	8	1⅓	23⅓	3⅓
August	64.77	78	54	24	9.9	14	18th	Morn	0⅓	1⅔	17⅔	11⅓
September	61.70	78	50	28	11.6	10	4th 6th 8th 9th	Noon Noon Mo & Ev Eve	---- ---- ---- 8⅓	---- ---- ---- 1	------ ------ ------ 19⅔	---- ---- ---- 1
October	49.07	70	34	36	7.5	12	4th 27th	M. & N. Morn	---- 7⅓	---- 0	------ 15⅔	---- 6
November	39.00	50	20	30	5.9	18	25th	Morn	8⅔	1	16⅓	9
December	24.87	46	-2	48	4.5	20	30th	Morn	10⅔	5	11⅔	2⅔

a For explanation of fractions see note to Table XXXV. The record of prevailing wind for the months of January, March, and October only embraces twenty-nine days in each month, and only thirty days for the month of December.

Table XXXIII. is contributed by Miss F. E. Whelpley. The statements are based upon observations by Miss Whelpley, at Monroe, Michigan.

TABLE XXXV.

Showing the Mean Temperature, the Highest and Lowest Temperature, the Monthly Range, the Mean Daily Range, and the Greatest Change in Twenty-four Hours; and also the Days of Prevailing Winds, and the amount of Rain and Melted Snow in Inches, for each Month of the Year 1870, at Northport, Michigan.

Year and Months, 1870.	Three Observations Daily,—at 7 A. M., 2 P. M., and 9 P. M.												
	Thermometer—Fahrenheit.								Days of Prevailing Winds. *a*				Rain and Melted Snow, in Inches.
						Greatest Change in 24 Hours.							
	Mean.	Highest.	Lowest.	Range.	Mean Daily Range.	Degrees of Rise or Fall.	Day of Month.	Hour of Observation.	North and East.	East and South.	South and West.	West and North.	
Year....	46.40°	93°	-12°	105°	12.4°	36°	Jan. 18th.	Morn	37	87⅔	106⅓	133⅔	48.805
Jan.....	22.17	38	4	34	8.5	36	18th....	Morn	4⅓	6	9⅔	11	1.60
Feb.....	20.37	40	-12	52	12.6	26	12th....	Noon	3	8	5⅓	11⅔	1.30
March...	27.20	49	-4	53	14.4	25	19th....	Eve	6⅓	7⅔	1⅓	15⅓	2.52
April....	45.00	81	30	51	16.6	28	24th....	Noon	4	6	7⅓	12⅔	3.875
May.....	57.47	82	44	38	16.7	23	3d.....	Morn	2⅔	10	10⅓	8	3.62
							14th....	Eve					
							24th....	Noon					
June....	66.34	93	48	45	16.2	20	23d.....	Eve	2⅓	5	11	11⅔	3.5
July....	68.57	86	54	32	12.4	17	24th....	Eve	2⅓	6⅓	13	9⅓	10.875
Aug.....	66.17	82	50	32	12.7	24	19th....	Eve	0⅓	9	13⅓	8⅓	6.125
Sept.....	65.57	82	50	32	14.2	14	9th.....	Morn	5⅓	9	5⅔	10	2.75
Oct.....	51.27	74	35	39	9.9	24	27th....	Morn	1	8⅔	11	10⅓	8.00
Nov.....	39.00	62	23	39	10.1	23	9th.....	Noon	1	6⅓	11⅓	11⅓	1.57
Dec. ...	27.63	49	10	39	4.9	17	20th....	9 P. M.	4⅓	5⅔	7	14	3.07

a The fractions in these columns refer to the three daily observations,—⅓ indicates that the wind blew from the given direction at one of the observing hours; ⅔ that it was the same at two of the hours, and 1 that it did not change during the day.

TABLE XXXVI.

Showing the Mean Temperature, the Highest and Lowest Temperature, the Monthly Range, the Mean Daily Range, and the Greatest Change in Twenty-four Hours; and also the Days of Prevailing Winds, and the amount of Rain and Melted Snow in Inches, for each Month of the Year 1870, at Alpena, Michigan.

Months, 1870.	Three Observations Daily—at 7 A. M., 2 P. M., and 9 P. M.												
	Thermometer—Fahrenheit.								Days of Prevailing Winds. *a*				Rain and Melted Snow, in Inches.
						Greatest Change in 24 Hours.							
	Mean.	Highest.	Lowest.	Range.	Mean Daily Range.	Degrees of Rise or Fall.	Day of Month.	Hour of Observation.	North and East.	East and South.	South and West.	West and North.	
11 Months	46.40°	88°	-8°	86°	8.3°	27°	Jan. 18	Morn...	72⅔	110	66⅓	85	33.82
January..	23.64	36	8	28	7.6	27	18th...	Morn...	3	5⅔	15⅔	6⅔	4.15
February.	20.80	35	-3	38	7.1	24	18th...	Morn...	6	6⅓	4⅔	11	5.40
March....	26.57	43	10	33	8.5	16	20th...	Morn...	8	8⅔	2⅓	12	3.60
April.....	40.10	56	29	27	8.6	20	28th...	Eve.....	9⅔	8⅔	2⅔	9	1.84
May.....	52.24	76	42	34	9.6	14	16 & 19	Noon...	13	11⅔	2	4⅓	1.78
June.....	62.47	80	44	36	8.7	12	5th.... 16th...	Noon. Eve...	7⅓	13⅔	4	5	3.11
July.....	66.07	83	56	27	9.2	18	13th...	Noon...	6	12⅔	6⅔	5⅔	3.29
August ..	66.30	82	50	32	9.8	22	26th...	Morn...	3⅔	13⅓	7⅓	6⅔	2.57
Sept.....	61.90	74	52	22	8.4	11	23d....	Noon...	9⅓	14	1	5⅔	2.97
Oct.....	51.84	70	35	35	6.9	23	25th...	Noon...	4⅔	9	9⅔	7⅔	4.20
Nov.....	38.44	56	22	34	6.7	22	9th....	Eve.....	2	6⅓	10⅓	11⅓	.96
Dec. *b* ...	.....	....	....	....	....	....	.....	.....	....	....	....	....	.....

a For explanation of fractions, see note to Table XXXV.
b No record for December.

Tables XXXIV. to XXXVII., inclusive, were prepared for this Report by the Smithsonian Institution at Washington, D. C.

TABLE XXXVII.

Showing the Mean Temperature, the Highest and Lowest Temperature, the Monthly Range, the Mean Daily Range, and the Greatest Change in Twenty-four Hours; and also the Days of Prevailing Winds, and the amount of Rain and Melted Snow in Inches, for Each Month of the Year 1870, at Grand Rapids, Michigan.

Year and Months, 1870.	Three Observations Daily,—at 7 A. M., 2 P. M., and 9 P. M.												
	Thermometer—Fahrenheit.								Days of Prevailing Winds. *a*				
						Greatest Change in 24 Hours.							
	Mean.	Highest.	Lowest.	Range.	Mean Daily Range.	Degrees of Rise or Fall.	Day of Month.	Hour of Observation.	North and East.	East and South.	South and West.	West and North.	Rain and Melted Snow in Inches.
Year	50.70°	102°	-10°	112°	15.7°	31°	Jan. 17	Eve.	54⅘	84	137	61⅓	25.70
January	25.07	41	7	34	11.9	31	17th	Eve.	4⅘	3⅓	12⅓	5⅘	1.45
February	25.54	48	-10	58	16.2	29	12th	Noon	2	8⅓	10⅓	6⅓	0.68
March	31.04	56	0	56	14.8	28	17th	Morn	10⅘	7	3	10⅓	2.66
April	51.91	82	30	52	19.1	30	16th	Morn	6	6⅘	10	7⅓	None
May	66.19	93	48	45	18.5	18	6th 23d 24th	Noon Morn Noon	3	10⅓	14⅓	3⅓	0.93
June	73.37	102	58	49	16.5	21	13th	Noon	3⅘	9⅓	14⅓	2⅘	3.66
July	76.54	99	58	41	15.6	25	1st	Noon	1	3	8	2	0.76
August	71.25	90	50	40	16.3	24	7th	Noon	3⅓	6	15⅓	3⅓	1.60
September	67.61	89	49	40	13.2	20	30th	Noon	5⅘	12⅘	10⅓	1⅓	2.77
October	53.01	80	33	47	15.5	28	28th	Morn	5⅓	6	12⅓	5⅓	5.07
November	39.44	69	16	53	15.4	28	9th	Noon	4⅓	8⅓	12⅘	4⅘	1.37
December	27.48	52	-2	54	10.7	18	30th	Morn Noon	5	3	14	9	4.75

a For explanation of fractions see note to Table XXXV. The record of prevailing wind is for only 14 days in July, 28 days in August, and 29 days in October.

LAWS OF MICHIGAN

CONCERNING THE

SOLEMNIZATION OF MARRIAGES,

AND THE

RECORD AND RETURN

OF

BIRTHS, MARRIAGES, AND DEATHS.

CHAP. CLXIX., COMPILED LAWS OF 1871.

MARRIAGE AND THE SOLEMNIZATION THEREOF.

SECTION.
4719. Who shall be capable of contracting Marriage.
4720. Marriage is a civil contract.
4721. Who shall not intermarry.
4723. 4724. Who not to Marry.
4725. Marriage, by whom solemnized.
4726. One of parties to be examined on oath.
4727. No particular form required.
4728. Forfeiture for joining persons in Marriage contrary to law.
4729. Punishment of persons unauthorized etc.
4730. Marriages not void in certain cases.
4731. Marriages among Quakers, etc.
4732. Certificates and record made evidence,

Chapter Eighty-three of Revised Statutes of 1846. *a*

(4719.) SECTION 1. Every male who shall have attained the full age of eighteen years, and every female who shall have attained the full age of sixteen years, shall be capable in law of contracting marriage, if otherwise competent.

(4720.) Sec. 2. Marriage, so far as its validity in law is concerned, is a civil contract, to which the consent of parties capable in law of contracting is essential.

(4721.) Sec. 3. No man shall marry his mother, grandmother, daughter, grand-daughter, stepmother, grandfather's wife, son's wife, grandson's wife, wife's mother, wife's grandmother, wife's daughter, wife's grand-daughter, nor his sister, brother's daughter, sister's daughter, father's sister, or mother's sister.

(4722.) Sec. 4. No woman shall marry her father, grandfather, son, grandson, stepfather, grandmother's husband,

a For prior Statutes relative to the solemnization of Marriages, see Woodward Code, p. 42; Cass Code, p. 111; Code of 1820, p. 259; Rev. of 1827, p. 280; Laws of 1832, p. 6; Rev. of 1833, p. 329; R. S. of 1838, p. 333.

daughter's husband, granddaughter's husband, husband's father, husband's grandfather, husband's son, husband's grandson, nor her brother, brother's son, sister's son, father's brother, or mother's brother.

(4723.) Sec. 5. No marriage shall be contracted whilst either of the parties has a former wife or husband living, unless the marriage with such former wife or husband shall have been dissolved.

(4724.) Sec. 6. No white person shall intermarry with a negro, and no insane person or idiot shall be capable of contracting marriage.

(4725.) Sec. 7. Marriages may be solemnized by any justice of the peace in the county in which he is chosen; and they may be solemnized throughout the State by any minister of the gospel, who has been ordained according to the usages of his denomination, and who resides in this State, and continues to be a preacher of the gospel. *a*

(4726.) Sec. 8. All justices of the peace and ministers of the gospel are hereby authorized and required, before solemnizing any marriage, to examine at least one of the parties on oath, which oath they are hereby authorized to administer, as to the legality of such intended marriage.

(4727.) Sec. 9. In the solemnization of marriages, no particular form shall be required, except that the parties shall solemnly declare, in the presence of the magistrate or minister, and the attending witnesses, that they take each other as husband and wife; and in every case there shall be at least two witnesses, besides the minister or magistrate, present at the ceremony.

Sec. 10. *b*

Sec. 11. *b*

Sec. 12. *b*

Sec. 13. *b*

---

a The Mayor of Flint is also authorized to solemnize the marriage ceremony.—Laws of 1857, p. 36, Sec. 3.

b Repealed by Act 194, Laws of 1867, p. 266, Sec. 10.

(4728.) Sec. 14. If any justice of the peace or minister of the gospel shall join any person in marriage contrary to the provisions of this chapter, he shall forfeit for every such offense a sum not exceeding five hundred dollars.

(4729.) Sec. 15. If any person shall undertake to join others in marriage, knowing that he is not lawfully authorized so to do, or knowing of any legal impediment to the proposed marriage, he shall be deemed guilty of a misdemeanor; and upon conviction thereof, shall be punished by imprisonment in the county jail not more than one year, or by a fine not less than fifty nor more than five hundred dollars, or by both such fine and imprisonment, in the discretion of the court.

(4730.) Sec. 16. No marriage solemnized before any person professing to be a justice of the peace or a minister of the gospel, shall be deemed or adjudged to be void, nor shall the validity thereof be in any way affected, on account of any want of jurisdiction or authority in such supposed Justice or minister: *Provided,* The marriage be consummated with a full belief on the part of the persons so married, or either of them, that they have been lawfully joined in marriage.

(4731.) Sec. 17. The preceding provisions of this chapter, so far as they relate to the manner of solemnizing marriages, shall not affect marriages among the people called Friends or Quakers; nor marriages among people of any other particular denomination having, as such, any peculiar mode of solemnizing marriages; but such marriages may be solemnized in the manner heretofore used and practiced in their respective societies or denominations.

(4732.) Sec. 18. The original certificates and records of marriage made by the minister or justice, as prescribed in this chapter, and the record thereof made by the county clerk, or a copy of such record duly certified by such clerk, shall be received in all courts and places as presumptive evidence of the fact of such marriage.

AN ACT

TO PROVIDE FOR THE

REGISTRATION OF BIRTHS, MARRIAGES, AND DEATHS.

BEING ACT No. 194 OF 1867, AS AMENDED BY ACT No. 125 OF 1869.

Duties of supervisor and assessors.

SECTION 1. *The People of the State of Michigan enact,* That it shall be the duty of the supervisor of each township, and the supervisor or assessor of any city or ward therein, in this State, between the tenth day of April and the first day of June, in the year eighteen hundred and sixty-nine, to ascertain, by actual inquiry or otherwise, of the inhabitants thereof, the births and deaths which have occurred in their respective townships, cities, or wards, from and including April fifth, eighteen hundred and sixty-eight, to and including December thirty-first, eighteen hundred and sixty-eight, together with the facts relative thereto, as are hereinafter provided for, and shall make an accurate return thereof to the clerk of the county in which such township or city is situated, on or before the first said day of June; and for such service shall receive ten cents for each birth and death so returned by them, to be paid by the county in which such returns are made. In the year eighteen hundred and seventy, and in each and every year thereafter, it shall be the duty of the officers above mentioned, between the tenth day of April and the first day of June, to ascertain by actual inquiry or otherwise, of the inhabitants thereof, the births and deaths which have occurred in their respective townships, cities, or wards, during the year ending on the last day of the

In 1869 returns to be made from April 5 to Dec. 31, 1868

Return to county clerk

In 1870 and thereafter.

Returns to include from January to December last preceding.

Statistics, how obtained.

preceding December, and shall make the return, and receive therefor the compensation above provided for: *Provided*, That in the city of Detroit, the duties required by this act to be performed by supervisors and assessors shall be performed by persons appointed by the common council for that purpose; and it shall be the duty of the common council, on or before the tenth day of April, in each year, to appoint such number of persons in each ward of said city, as shall be necessary to perform said duties within the time limited by this act; and such persons shall possess all the authority conferred upon, and perform all the duties required of supervisors and assessors, by this act, within the territory assigned them respectively, by the common council, and shall receive such compensation for their services, not exceeding the sum allowed by this act to supervisors and assessors, as shall be fixed by the common council, to be paid by the county of Wayne, and shall be liable to the same penalties for refusal or neglect to perform any of said duties.

Compensation.

Proviso relative to the city of Detroit.

Duty of common council.

Persons to be appointed by.

Compensation of persons so appointed.

How paid.

Penalties.

SEC. 2. Every justice of the peace, minister of the gospel, and all other persons authorized by law to solemnize marriages in this State, shall make a record of each marriage so solemnized by him, and every clerk or keeper of the records of the meetings in which any marriage among the Friends or Quakers shall be solemnized, shall make a record of such marriage, together with all the facts relating to the same, as required by the third section of this act; and such justice, minister of the gospel, clerk, or other person, shall, at the time such marriage is solemnized, deliver, on demand, to either of the parties so joined in marriage, as aforesaid, a certificate of such marriage, containing all the facts in relation thereto, required by said third section of this act, and shall, within ninety days thereafter deliver to the clerk of the county in which such marriage took place, a certified copy of such record, and, at the same time, pay to the clerk twenty-five cents for recording the same.

Marriages to be recorded.

Marriage of Quakers.

Certificates to be furnished.

Fee for recording.

County clerks; duties of.

SEC. 3. It shall be the duty of the county clerks of the several counties in this State, on receiving the returns of such births, marriages and deaths, to record the same at length in separate books, to be provided at the expense of the State by the Secretary of State, for that purpose, with proper indexes thereto. The births, marriages and deaths shall be numbered and recorded in the order in which they are received by the clerk, and the record of marriages shall be indexed, using both the name of the bridegroom and bride. The record of births shall state, in separate columns, the date of the birth, the name of the child (if it have any), the sex and color of the child, the place of birth, the christian and surname of both parents, the residence and nativity of the parents, the occupation of the father, and the date when the record was made: *Provided*, That in case the child has no christian name, such name shall be obtained and reported to the county clerk in the next annual report of the supervisor or assessor, and such christian name shall be distinctly designated in such report as the christian name belonging to a child previously reported, and shall be properly entered by said county clerk, in the blank left for such christian name in his book of record; and it shall be the duty of the several county clerks, on or before the tenth day of April in each year, to give to the officers required to make the said returns, lists of such children whose christian names have not been previously reported in their respective towns, cities or wards. The record of marriages shall state, in separate columns, the date and place of marriage, the christian and surname of the bridegroom and bride, and the maiden name of the bride, if a widow, the color, age and place of birth of each, the residence of each at the time of marriage, the occupation of the bridegroom, and the name and official station of the person by or before whom they were married, the names and residences of at least two witnesses present at such marriage, and the date when such record was made. The record of deaths shall state, in separate columns, the date of the death, the

Births, marriages and deaths to be numbered and indexed.

Record of births shall state.

Proviso.

Record of marriages shall state.

Record of deaths shall state.

christian and surname of the deceased, the sex and color, whether married or single, the age in years, months, and days, the place of death, the disease or apparent cause of death, the nativity of the deceased, and the occupation, if any, and the names, residence of the parents, if known, and the date when such record was made. The clerks of the several counties shall annually, on or before the first day of September, make and transmit to the Secretary of State, a certified copy of the records in his office, of all the births, marriages and deaths reported in their respective counties for the year ending December thirty-first, last preceding. And each county clerk shall receive for the record of each birth and death in his office three cents, and three cents for each birth, marriage, and death returned by him to the Secretary of State, to be paid by the county, and shall be compensation in full for all services required by this act to be performed by him.

Return of county clerk.

Compensation.

SEC. 4. The Secretary of State shall prepare and furnish to the county clerks of the several counties in this State, blank books of suitable quality and size, with proper rulings and headings, to be used as books of record in carrying into effect the provisions of this act. He shall also prepare and furnish blank "forms of returns," as hereinbefore specified, accompanied with such instructions and explanations as may be necessary to insure uniformity in such returns, which blanks shall be forwarded to the several county clerks on or before the first day of March in each year; and the said county clerks shall deliver the same to the supervisors or assessors of the several townships, cities, or wards therein, in their respective counties, on or before the tenth day of April.

Secretary of State; duties of.

SEC. 5. It shall be the duty of the Secretary of State to receive the returns made in pursuance of the third section of this act, and he shall cause the same for each year to be bound together, in one or more volumes, at the expense of the State, and make indexes thereto; and with such assistance as may be voluntarily rendered by any authorized committee appointed

Bound volumes of reports.

Secretary of State's report to Governor.

by the medical faculty of the University of Michigan, or by any regularly authorized medical society in this State for that purpose, he shall prepare such tabular statements, results, and deductions therefrom as will render them of practical utility, and make report thereof, annually, to the Governor of the State, which report may be ordered published and distributed in such manner as the Legislature may from time to time direct.

Neglect to keep records.

SEC. 6. Every justice of the peace, minister of the gospel, and all other persons authorized by the laws of this State to solemnize marriages, and clerks or keepers of records of the meetings in which any marriage among the Friends or Quakers shall be solemnized, who shall neglect or refuse to make a record of such marriage, or to deliver to the county clerk of the county in which the marriage took place, a certified copy of such record, or who shall refuse, on demand, to deliver to the parties to such marriage the certificate thereof, as required by section two of this act, or who shall willfully make a false or fictitious entry in his record of marriages, or in the certified copy of such record delivered to the county clerk, or in the certificates of marriages delivered to the parties thereto, shall be deemed guilty of misdemeanor, and upon conviction thereof, shall be punished by fine not exceeding one hundred dollars, and in default of paying the same, shall be imprisoned in the county jail of the county in which such conviction shall be had, until said fine be paid, but not to exceed the period of ninety days.

Neglect to deliver certificates.

Penalty.

Certificate of death.

SEC. 7. Every physician, surgeon, or midwife, who shall have been in attendance upon any deceased person, shall, upon application of any supervisor or assessor of the township, city, or any ward thereof, in which such death occurred, make out and deliver to such supervisor or assessor a certified statement, without fee, containing the name of the disease, or cause (if known), producing the death of such person; and any medical attendant who shall neglect or refuse to give such state-

ment, or who shall willfully make a false statement in relation to such death, shall, for such offense, be liable to pay a fine of not less than ten nor more than fifty dollars, and the costs of prosecution, which fine the said supervisor or assessor is hereby required to sue for and collect, in his official character.

Refusal to make certificate.

Penalty.

SEC. 8. It shall be the duty of each supervisor or assessor to obtain the facts in relation to births and deaths within his township, city, or any ward therein (not otherwise obtained), from the heads of families, the keepers, overseers or superintendents of asylums, hospitals, jails, prisons, workhouses, almshouses, houses of correction, and similar institutions, the keepers of hotels, public and private boarding-houses, and the masters or chief officers of steamboats and sail-vessels navigating any of the waters of this State, and touching at any port of entry therein, in which such births or deaths occurred; and if either of the above named persons shall refuse to give such information, then the same shall be obtained by such supervisor or assessor from any person having a knowledge of the facts in relation to such birth or death; and if the supervisor or assessor shall have reason to believe that any person or persons willfully misrepresented or concealed any facts relative to such birth or death in his township, city, or any ward therein, which he cannot otherwise obtain, he may examine such person or persons on oath (which oath such supervisor or assessor is hereby empowered and authorized to administer) in relation to any birth or death within his township, city, or any ward therein, of which such person or persons may have any knowledge or information; and, if any person, after being duly subpœnaed (as provided for compelling the attendance of witnesses in justices' courts) by such supervisor or assessor, for the purposes aforesaid, shall neglect or refuse to appear before such officer, or, appearing, shall refuse to be sworn and testify in relation to such matter, he shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished therefor by fine not exceeding fifty dollars, and in default of paying the same shall be imprisoned in the county jail of the

Facts to be obtained by supervisor.

Refusal to furnish.

Obtained under oath.

Neglecting to answer a subpœna.

Penalty.